



# **FDOH HIV/AIDS 500 The Basics of HIV/AIDS Learner Course Guide**

**July 2015**

To protect, promote & improve the health of all people in Florida through integrated state, county, & community efforts.



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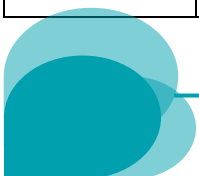






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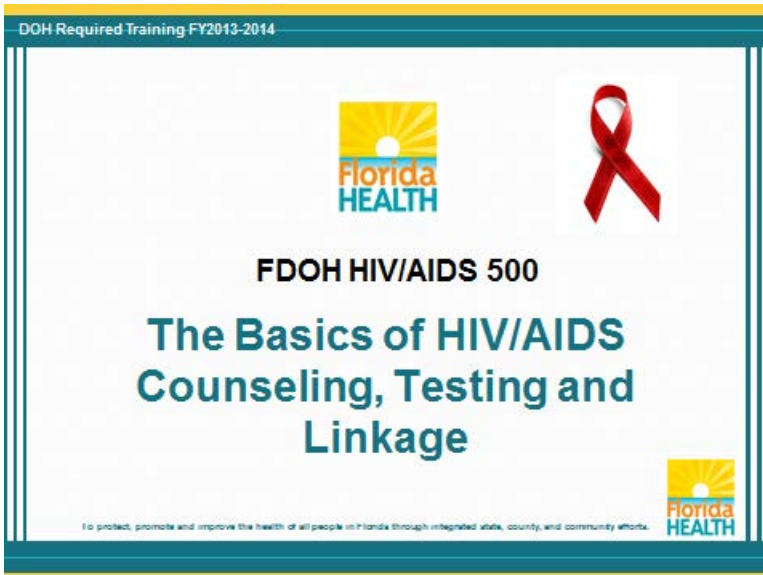
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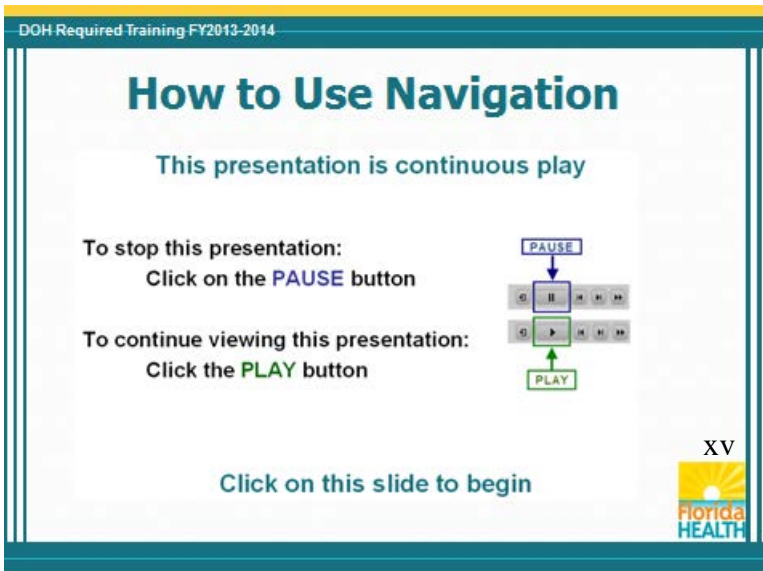
## Introduction

### Slide 1 – Welcome



The Florida Department of Health welcomes you to this on-line training of the FDOH HIV/AIDS 500 Course, The Basics of HIV/AIDS Counseling, Testing and Linkage.

### Slide 2 – Navigation Instructions



#### How to Use Navigation

In order to make your viewing experience as easy as possible during this DOH Required Training Course, we are providing these navigation instructions:

This presentation is formatted for continuous play.

If you need to stop the presentation, click on the PAUSE button, on the bottom left of the screen.

When you are ready to continue your viewing, click on the PLAY button on the bottom left of the screen.

Please keep these instructions in mind as you proceed with this presentation.

To begin viewing this presentation you will need to click directly on this slide now.






### Slide 3 – This Course

DOH Required Training FY2013-2014

## This Course

- Prerequisite for entry into 501 classroom course
  - Cannot substitute any other course including HIV/AIDS 101
  - Intended for persons providing HIV counseling, testing and linkage
- Authority in Florida Statute 381.004 referenced in Technical Assistance Guideline TAG 345-17-13



This course is the prerequisite for entry into the Counseling, Testing and Linkage HIV/AIDS 501 classroom course.



Participants cannot substitute any other course for this training including the HIV/AIDS 101 on-line course, and is intended for those who will be providing HIV prevention counseling, testing and linkage within Florida's publicly funded HIV test sites. Authority for this course is found in Florida Statute 381.004 as referenced in Technical Assistance Guideline TAG 345-17-13.

### Slide 4 – Goal of This Course

DOH Required Training FY2013-2014

## Goal of This Course

To introduce participants to standardized information regarding the basics of HIV and AIDS as it pertains to counseling, testing and linkage.



The goal of this course is to introduce participants to standardized information regarding the basics of HIV and AIDS as it pertains to counseling, testing and linkage.

HIV and AIDS present complicated issues. The better understanding a testing counselor has of these issues; the more comfortable it will be to share information.






## Slide 5 – Course Sources

DOH Required Training FY2013-2014

### Course Sources

Information in this course is referenced from credible sources such as:

- Florida Department of Health
- Centers for Disease Control and Prevention
- Food and Drug Administration
- National Institutes of Health



Information in this course is referenced from credible sources including the Florida Department of Health, the Centers for Disease Control and Prevention, the Food and Drug Administration, and the National Institutes of Health.



Participants are encouraged to remain current with related information from these and other sources.

## Slide 6 – You and This Course

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### You and This Course

- Complete entire course prior to conducting test services
- Print and keep the certificate
- Additional training materials will be provided



Counselors at Florida's publicly funded registered test sites must complete the entire HIV/AIDS 500/501 course prior to conducting HIV test services.

Participants who need to continue to the 501 classroom training must successfully complete this on-line course and, print and keep the course certificate of completion.

Additional materials will be provided to those who enroll in the 501 classroom training.









## Slide 7 – Course Structure

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### Course Structure

- Self-paced sections no time limits
- Please read and listen to each slide
- Complete each section in order
- Each section is followed by a test
- Complete all elements to receive a certificate



This course is divided into five self-paced sections with no time limits.

Please read and listen to each slide.

Complete each section in order.

Each section is followed by a test, which you must complete with a minimum score of 80% before moving to the next section.

And, you must complete all the course sections and tests to receive a certificate of completion.

The entire course of five sections may take as long as four hours to complete.

## Slide 8 – Table of Contents

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### Table of Contents


**Section 1:** History, Demographics, National HIV/AIDS Strategy, HIV/AIDS Basics, Testing Overview

**Section 2:** Transmission, Prevention, Treatment

**Section 3:** Counseling, Testing, Linkage

**Section 4:** General Legal Issues

**Section 5:** Infectious Diseases



The five sections of this training are:

Section 1: HIV history, demographics, the National HIV/AIDS Strategy, HIV/AIDS Basics, and an HIV testing overview

Section 2: HIV transmission, prevention, and treatment

Section 3: HIV counseling, testing and linkage (CTL)

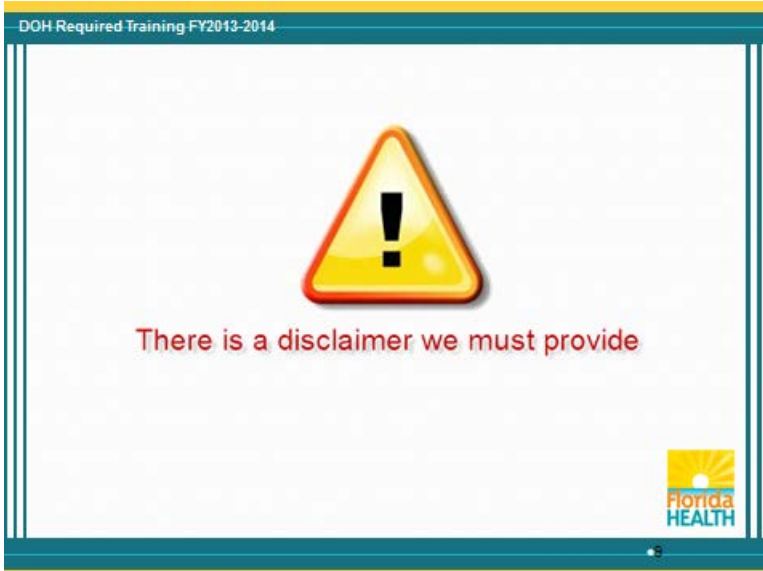
Section 4: General legal issues as they relate to counseling, testing and linkage

Section 5: Infectious diseases, including sexually transmitted diseases and hepatitis



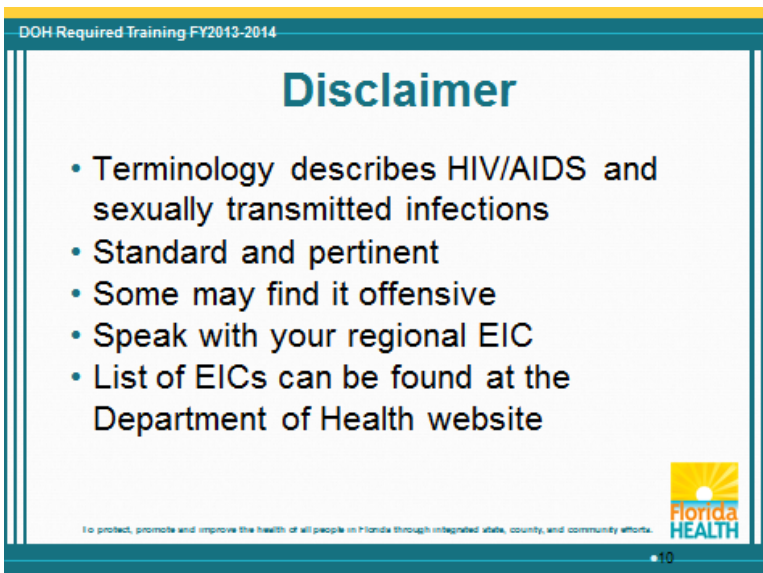


## Slide 9 – Warning



There is a disclaimer we must provide.

## Slide 10 – Disclaimer



**Disclaimer**

- Terminology describes HIV/AIDS and sexually transmitted infections
- Standard and pertinent
- Some may find it offensive
- Speak with your regional EIC
- List of EICs can be found at the Department of Health website

To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.

This course includes terminology that describes HIV/AIDS and sexually transmitted infections and diseases.

This terminology is standard and is meant to provide clear and pertinent information. However, some participants may find some of this information offensive. Should you find any part of this course to be offensive, go no further with the slides. If you wish to pursue becoming an HIV testing counselor in Florida, please speak with your regional HIV test representative called an Early Intervention Consultant or EIC. A list of EICs can be found at the Department of Health website.





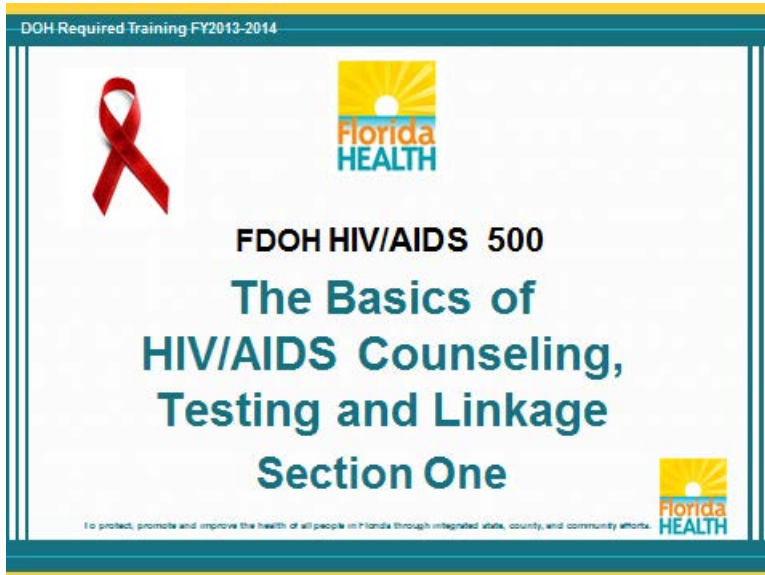
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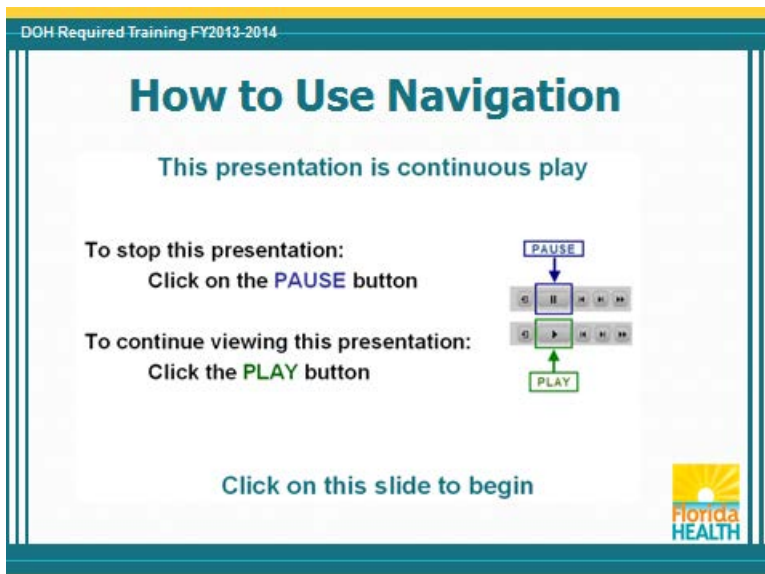
## Section One

### Slide 1 - Welcome



The Florida Department of Health welcomes you to the FDOH HIV/AIDS 500 Course, The Basics of HIV/AIDS Counseling, Testing and Linkage, Section One.

### Slide 2 - Navigation Instructions



#### How to Use Navigation

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### Slide 3 - Section One Will Cover

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**Section One**

**HIV History,  
Demographics, National  
HIV/AIDS Strategy,  
HIV/AIDS Basics, An  
Overview of HIV Testing**



Section one will cover:

- Highlights of HIV history in **the United States and Florida**
- HIV and AIDS demographics
- An introduction to The National HIV/AIDS Strategy
- HIV and AIDS basics
- An overview of HIV testing


This section should take about 45 minutes to complete.

### Slide 4 - Learning Objectives

DOH Required Training FY2013-2014

**Learning Objectives Section One**

- Know historical highlights of HIV/AIDS in the United States and Florida
- Know how The National HIV/AIDS Strategy impacts HIV prevention
- Understand the basics of HIV and the immune system
- Know the conditions that define AIDS



After finishing this section, participants will:

- Know the historical highlights of HIV/AIDS in the United States and Florida
- Know how The National HIV/AIDS Strategy impacts HIV prevention
- Understand the basics of HIV and the immune system, and
- Know the conditions that define AIDS.






## Slide 5 - Learning Objectives Continued

DOH Required Training FY2013-2014

### Learning Objectives Section One

- Understand the basics of HIV testing technologies and procedures
- Know the basic requirements that HIV test sites must meet
- Understand the role of the HIV/AIDS testing counselor





Additionally, participants will:

- Understand the basics of HIV testing technologies and procedures
- Know the basic requirements that HIV test sites must meet
- Understand the role of the HIV/AIDS testing counselor


## Slide 6 - Brief Overview of HIV History in the United States

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**Section One**

### Brief Overview of HIV History in the United States and Florida's HIV Testing Program



This part of Section One will offer a brief overview of HIV history in the United States and an overview of Florida's HIV testing program from the early 1990's into 2015. More detailed HIV/AIDS time lines can be found on the Internet.




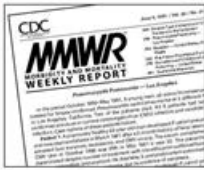


## Slide 7 - 1981 through 1984


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### 1981 to 1984

1981 rare infections reported by the CDC

1984 HIV was identified, AIDS was coined, blood test for HIV patented




In 1981, rare infections in gay men and those who received blood products were reported by the Centers for Disease Control and Prevention, or CDC, in the Weekly MMWR news. By 1984, the human immunodeficiency virus, or HIV, was identified, Acquired Immune Deficiency Syndrome, or AIDS, was coined and a blood test for HIV was patented.


## Slide 8 - 1984 through 1987

DOH Required Training FY2013-2014


### 1984 - 1987



1987 AIDS Quilt unveiled in Washington DC



Life magazine gave AIDS the face of a family



That same year, 1984, when AIDS was seen as a plague of gay men, Life magazine published a photo that gave AIDS the face of a family.

In 1987, the AIDS Quilt containing the names of people who died of this new disease was unveiled in Washington DC. Since then, it has become so large; the quilt can no longer be displayed in one place.



## Slide 9 - 1990 through 1995

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### 1990 to 1995



AIDS related deaths soared during the early 1990's and new AIDS medications approved

The Ryan White Care Act, named after a teen who died of AIDS, enacted in 1990



Due to new medications, AIDS related deaths began to decrease in 1995



The Ryan White Care Act, funding for the care of people with HIV and AIDS and named after an Indiana teenager who died of AIDS, was enacted in 1990. It has been reauthorized several times since.


AIDS related deaths soared during the early 1990's. In response, new AIDS medications began to be approved by the Food and Drug Administration, or FDA. Due to the new medications, AIDS related deaths began to decrease in 1995.

## Slide 10 - 1998 through 2004


DOH Required Training FY2013-2014

### 1998 to 2004



By 1998, physicians consider AIDS a chronic condition; oral based technology introduced



2001: Blood banks screen using NAAT



2004: Florida added rapid tests and explored the utility of NAAT

By 1998, AIDS related deaths declined by more than 40% and physicians began to consider AIDS as a chronic instead of fatal condition. HIV testing products improved and oral based technology was introduced.

In 2001, blood banks began to screen blood and organ donations using a test called nucleic acid amplification, or NAAT, that could find HIV as it reproduced in the blood stream.

Florida added rapid antibody screening tests to the HIV testing program in 2004; and, during the next few years, explored the programmatic utility of NAAT.



Slide 11 - 2009 through 2012

DOH Required Training FY2013-2014

## 2009 to 2012

2010: Relaxed restrictions



2009: Decoded HIV RNA





International AIDS Conference held in Washington, D.C.



The year 2009 uncovered secrets to HIV. Research at the University of North Carolina decoded the genetic language of HIV's core called RNA.

In 2010, the United States relaxed restrictions on HIV-positive people coming into the country. As a result, the 2012 International AIDS Conference was held in Washington, D.C.

Slide 12 – 2012 through 2015

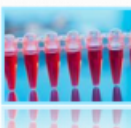
## 2012


Florida documented over 400,000 publicly funded HIV tests

Florida changed testing to include 4<sup>th</sup> generation screen and NAAT

## 2015

Florida amended the HIV/AIDS statute to state that HIV testing in medical settings will be “opt out” for patients instead of “opt in”





In 2012, Florida documented conducting over 400,000 publicly funded HIV tests, and changed the lab testing procedure for blood and plasma specimens to include a fourth generation screening test and NAAT as a confirmatory test.

In 2015, the Florida legislature amended the HIV/AIDS statute to state that HIV testing in medical settings will be “opt out” instead of “opt in”. Patients who do not wish to have an HIV test must inform their health provider. This change will make HIV testing in medical settings a matter of routine and not by special request from patients.







## Slide 13 - 2014 Florida Demographics

### 2014 Florida Demographics

Population of Florida was 19.6 million

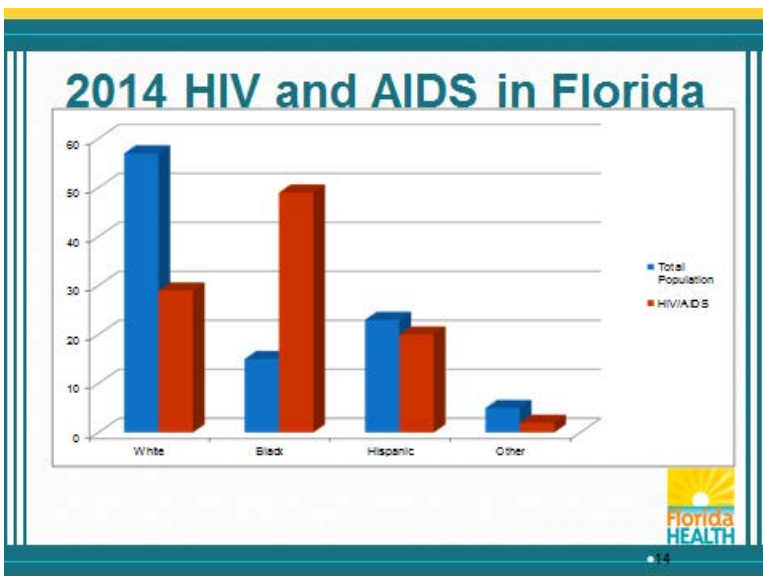
Persons living with HIV disease including AIDS was 106,335

Florida averages about 5,000 new HIV infections each year in all populations

In 2014, the population of Florida was 19.6 million, the third largest in the country. The number of reported cases of persons living with HIV disease including AIDS in Florida was 106,335 the third largest number in the country. Records show that Florida averages about 5,000 new HIV infections each year in all populations.

## Slide 14 - 2014 HIV and AIDS in Florida



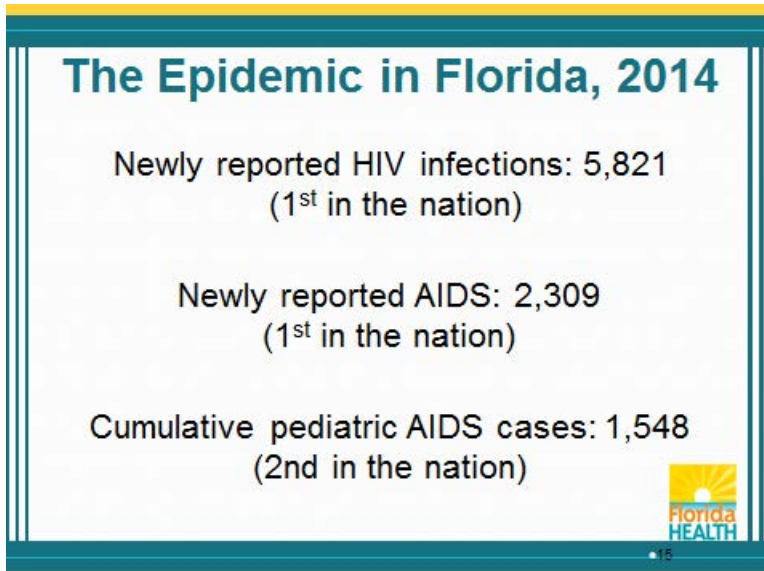
Florida's 2014 population breakdown was 57 percent white, 15 percent black, 24 percent Hispanic, and five percent other, which includes American Indian, Asian and Pacific Islanders, and Alaskan Natives.

Persons living with HIV/AIDS were 29 percent white, 49 percent black, 20 percent Hispanic, and two percent other.

This graph shows the disproportionate impact of HIV/AIDS on non-white people in Florida during 2014.



Slide 15 - The Epidemic in Florida, 2014




**The Epidemic in Florida, 2014**

Newly reported HIV infections: 5,821  
(1<sup>st</sup> in the nation)

Newly reported AIDS: 2,309  
(1<sup>st</sup> in the nation)

Cumulative pediatric AIDS cases: 1,548  
(2nd in the nation)

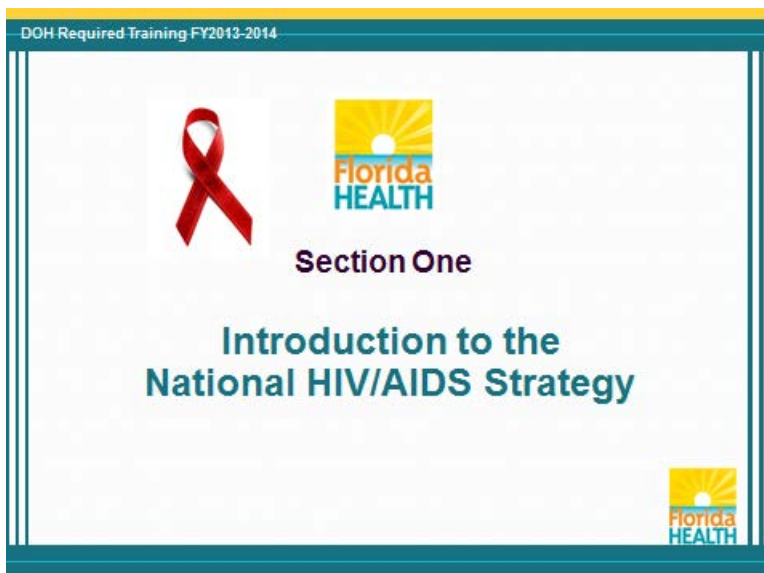


In 2014, Florida's newly reported HIV infections were 5,821 - the first in the nation as of 2011 numbers. Newly reported AIDS for 2014 was 2,309 – first in the nation.



And, the cumulative or overall number of pediatric AIDS, those under the age of 13, was 1,548 – second in the nation.

HIV related deaths in 2013 rose 1.3% from 2012

Slide 16 - Introduction to the National HIV/AIDS Strategy




DOH Required Training FY2013-2014



**Section One**

**Introduction to the  
National HIV/AIDS Strategy**



This next part of Section One will offer an introduction to the National HIV/AIDS Strategy, referred to as the Strategy.

To understand Florida's HIV Prevention Program, HIV testing counselors need to become familiar with the Strategy, which was released in 2010 by the Office of National AIDS Policy.



## Slide 17 - Comprehensive Plan

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### Comprehensive Plan

- Comprehensive coordinated national HIV/AIDS plan
- Clear and measurable goals
  - Reduce HIV incidence
  - Increase access to care and optimize health outcomes
  - Reduce HIV-related health disparities
  - Provide HIV testing and medical linkage



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The Strategy is the nation's first comprehensive, coordinated HIV/AIDS plan that includes clear and measurable goals.

The primary goals of the Strategy are:

- Reduce HIV incidence
- Increase access to care and optimize health outcomes
- Reduce HIV-related health disparities
- Provide appropriate HIV testing and linkage to medical care.

## Slide 18 - Testing and Medical Care

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### Testing and Medical Care

- 1 in 5 people don't know they are infected
- Improve HIV prevention, testing, linkage and treatment programs



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Two of the main focuses of the Strategy are testing and medical care. The need for a national strategy hinges on the fact that nearly 1 in 5 HIV-positive people in the U.S. do not know they are infected. This translates to about 250,000 or a quarter of a million people at any given time.


States are challenged to improve HIV prevention, testing, linkage and treatment programs.




## Slide 19 - National Call to Action

DOH Required Training FY2013-2014

### National Call to Action



- Unite and combat the epidemics of HIV infection and AIDS
- Help individuals and communities improve overall health
- Lessen stigma and inequality associated with HIV and AIDS





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Above all, the Strategy creates a national call to action for all Americans to unite and combat the epidemics of HIV infection and AIDS, help individuals and communities improve their overall health and lessen the stigma and inequality associated with HIV and AIDS.


## Slide 20 - The Basics of HIV and AIDS

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Section One

### The Basics of HIV and AIDS



This next part of Section One will offer the basics of HIV infection, the immune system and the conditions that define AIDS.



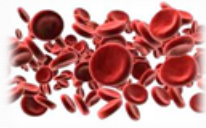



## Slide 21 - Origin of HIV

DOH Required Training FY2013-2014

### Origin of HIV

- Arose from non-human primate virus, SIV
- Migrated from Africa into Europe, Asia and the Americas
- Two members of the HIV family
- Can quickly mutate
- Effects every social strata, race, sexual orientation

21

### Origin of HIV

Current theory suggests that HIV arose from another virus called SIV that infected non-human primates. SIV may have moved into human populations due to hunting activities and mutated to infect the human immune system. HIV may have migrated out of Central and sub-Saharan Africa into Europe, Asia and the Americas due to increased commerce, international travel, the sexual "revolution" of the 1970's and the availability of antibiotics to treat certain sexually transmitted diseases.



There are two different members of the HIV family, HIV-1 and HIV-2, along with several groups and subtypes that are found throughout the world.

## Slide 22 - HIV and the Immune System

DOH Required Training FY2013-2014

### HIV and the Immune System

- The Defense of the Immune System
- The Initial Invasion of HIV
- A Description of Virus
- The Immune System War
- How AIDS is Defined
- The Basics of HIV Testing Technologies

22

This section will offer an overview addressing:

- The defense mechanisms of the immune system
- The initial invasion of HIV into specific cells
- A description of the HIV virus
- How the immune system creates a "war" against HIV
- How AIDS is defined
- The basics of HIV testing technologies.

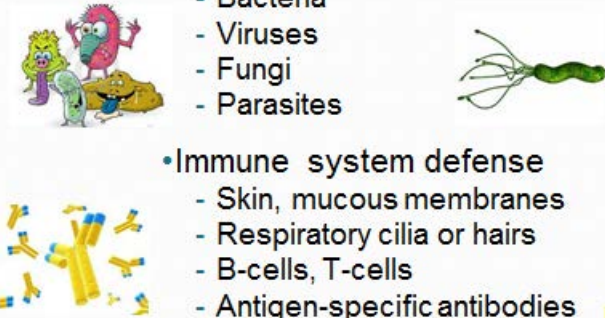


## Slide 23 - The Defense

DOH Required Training FY2013-2014

### The Defense

- Invaders
  - Bacteria
  - Viruses
  - Fungi
  - Parasites
- Immune system defense
  - Skin, mucous membranes
  - Respiratory cilia or hairs
  - B-cells, T-cells
  - Antigen-specific antibodies



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To defend against invading antigens such as bacteria, viruses, fungi, and parasites, the body calls into action a remarkable arsenal of defenses found within the immune system.


The immune system is composed of several lines of defense, the first of which is our skin, mucous membranes and cilia or hairs of the nose and respiratory system. Moving within our blood stream is a complex group of cells that make the immune system. These include B-cells, T-cells and antigen-specific antibodies.

## Slide 24 - Captains of the Immune System

DOH Required Training FY2013-2014

### Captains of the Immune System

- T4 (CD4 lymphocytes)
  - Direct the actions of the immune system
  - Sought out and attacked by HIV
- Without T4 cells
  - Combating infections cannot take place
  - Immune system breaks down



24

When antigens invade the skin or mucus membranes, our T4, or CD4 lymphocytes, are activated to direct the actions of other immune system cells. For this reason, T4 cells are called the captains of the immune system.

Ironically, the T4 cells are sought out and attacked by HIV. Without the T4 cells, the process of combating specific infections cannot take place, and, without the T4 cells, the immune system breaks down or becomes deficient.



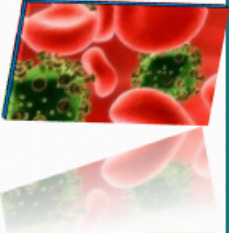

## Slide 25 - The Initial Invasion

DOH Required Training FY2013-2014

### The Initial Invasion

HIV attaches to CD4 cells and:

- Inserts HIV RNA
- Forces cells to reproduce HIV
- Creates an initial high viral load
- Reduces the number of T4 cells
  - Susceptible to infections
  - Very contagious with HIV
  - Acute HIV infection

25

Once in the blood stream, HIV attaches to CD4 cells found on certain organs and immune cells. The immune response cannot destroy HIV once it inserts its genetic material, called RNA, into a cell.

Once inside, HIV forces cells to reproduce more HIV by using various enzymes. These enzymes are targeted by anti-HIV medications.

Early HIV infection creates an initial high viral load or number of HIV cells in the blood stream. The high viral load will reduce the number of immune system T4 cells making a person susceptible to infections and very contagious with HIV. This period of the infection process is called acute HIV infection or AHI.



It is important for HIV testing counselors to understand acute HIV infection.

## Slide 26 - The Virus

DOH Required Training FY2013-2014

### The Virus

- HIV is a retrovirus
- Passed through bodily fluids
  - Blood
  - Semen
  - Breast milk
  - Vaginal secretions
- Rapidly reproduces
- Helped by co-factors

26

HIV is a retrovirus that uses a single strand of RNA, instead of double strand DNA, to reproduce. HIV is passed from an infected person to a non-infected person through body fluids – the most common of which are blood from anyone, semen from men, and breast milk and vaginal secretions from women.

Once RNA is inserted into CD4 cells, HIV rapidly reproduces. Nine billion new HIV cells can be generated the first 24 hours after infection.

HIV transmission can be helped by co-factors like sexually transmitted diseases that may cause a break in the skin or mucus lining. Examples are herpes, syphilis and genital warts.




## Slide 27 - The War

DOH Required Training FY2013-2014

### The War

- Uses many different cells
- Seeks and destroys HIV
- Screening tests look for HIV antibodies
- Most people will trigger a test within three months
- HIV kills T4 cells
  - Healthy adults have 800 to 1200 T4 cells
  - People with AIDS may have 200 or less



27

The immune system uses many different cells to fight HIV. Even while losing cells, the immune system seeks and destroys HIV. An important cell in this war is the antibody. HIV screening tests look for HIV specific antibodies. Most people will have enough antibodies to trigger a test within three months after HIV infection.

## Slide 28 - AIDS

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### AIDS

AIDS is:

- Positive for HIV antibodies or antigen, and
- T4 cell count of 200 or less, and/or
- Opportunistic infection

Chronic and manageable condition

- Early detection
- Access to medical care
- Remain in medical care

28

HIV Infection and AIDS are two separate diagnoses. AIDS is diagnosed when a person tests positive for HIV antibodies or antigen, and/or, has a T4 count of 200 or less, and/or, has one or more AIDS defining opportunistic infections. A loss of T4 cells gives infections an opportunity to flourish. Some of these infections define AIDS.

Today, AIDS is considered to be a chronic and manageable condition much like diabetes. Key elements for a managed condition are early detection of HIV infection, access to medical care and remaining in medical care to receive proper medications and monitoring.





## Slide 29 - Opportunistic Infections

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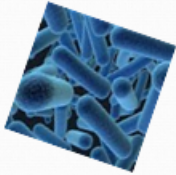

### Opportunistic Infections

Pathogens that take opportunity to thrive

- Old infections
- New infections
- May experience one or more OI

OI examples

- Tuberculosis (TB)
- Pneumocystis carinii pneumonia (PCP)
- Mycobacterium avium complex (MAC)
- Cytomegalovirus (CMV)

29

Opportunistic infections, or OIs, are caused by pathogens or antigens that take an opportunity to thrive. These can be old infections someone had in the past like chicken pox or thrush, or new infections like pneumonia. All OIs take the opportunity of an immune system weakened by HIV infection.

Because HIV infection can last for decades and because we are exposed to many pathogens over our life span, HIV-infected people may experience one or more opportunistic infections, or more than one at the same time.


OIs are expressed as a bowl of alphabet soup. For example: Tuberculosis is TB; Pneumocystis carinii pneumonia is PCP, Mycobacterium avium complex is MAC, and cytomegalovirus is CMV, etc.

Primary medical treatment helps prevent OIs, and secondary medical treatment helps prevent OIs from reoccurring.


## Slide 30 - Common OIs

DOH Required Training FY2013-2014

### Common OIs



- Candidiasis (Thrush)
- Cervical Carcinoma
- Herpes
- Hepatitis B
- Tuberculosis (TB)
- Toxoplasmosis (Toxo)



30

Because of environmental differences, opportunistic infections will vary from location to location. In Florida, some of the more common AIDS defining infections are:


- Candidiasis, commonly called Thrush, a fungal infection in the mouth or other mucosal linings
- Invasive Cervical Carcinoma, a cancer seen only in women
- Herpes, a virus found in or around the mouth, nose, eyes, or genitals
- Hepatitis B, a member of another group of blood-borne viruses
- Tuberculosis or TB, a bacterial infection of the lungs
- Toxoplasmosis or Toxo, is a parasitic infection found in various organs including the brain.

Any one of these infections can be life-threatening if left untreated.




## Slide 31 - The Basics of HIV Testing

DOH Required Training FY2013-2014



**Section One**

### The Basics of HIV Testing



### The Basics of HIV Testing



This part of Section One offers an introduction to HIV testing technologies and products along with testing algorithms or testing procedures. More details of HIV testing are offered in section three.

## Slide 32 - The Window Period

DOH Required Training FY2013-2014

### The Window Period

- Time from infection to antibody production
- May vary from person to person
- Mild or flu-like symptoms
- Antibody tests may miss HIV
- Antigen tests may find HIV
- Antibody window of months
- Antigen window of days to weeks

32

The Window or Seroconversion Period refers to the time from infection to antibody production within the immune system. This time frame will vary lasting from days to months and from person to person.

The first few days after infection, while the body is creating antibodies, a person may experience mild symptoms that can be flu-like or more severe with fever, swollen glands, or tiredness. The early onset of HIV infection can be misdiagnosed.

Antibody tests given during the window period may miss HIV infection. Only antigen blood tests can find HIV infection during the window period.

Generally speaking, antibody tests have a window period as long as 3 to 6 months and antigen tests may have a window period of days to weeks after infection.



### Slide 33 – Antibody Immunoassay

DOH Required Training FY2013-2014



## Antibody Immunoassay

**Screens**

- Lab-based
- Waived rapid


**Confirmatory**

- Supplemental
- Western blot
- IFA

**Samples**

- Blood
- Oral
- Dried blood spot



33

HIV testing technologies can be broken into two major categories antibody or antigen. Antibody tests are conducted on blood, oral, or dried blood spot samples.

Antibody immunoassay testing begins with screens that are either lab-based or waived rapid tests. Screens that are reactive or positive for HIV antibodies must be confirmed with an approved test.

Antibody confirmatory tests include the use of a supplemental, Western blot or Immunofluorescent Assay called IFA.

### Slide 34 – Antigen Assays

DOH Required Training FY2013-2014


## Antigen Assays

**Screens**

- Antibody/Antigen immunoassay


**Confirmatory**

- Antibody supplemental
- NAAT
- PCR
- Viral load



**Samples**

- Blood
- Plasma



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Antigen tests are conducted on blood and plasma samples submitted to a laboratory or with new rapid test technologies.

Antigen tests look directly for HIV and begin with an antibody/antigen combination immunoassay screening test.

Confirmatory testing for positive screens can be done by an antibody supplemental, antigen Nucleic Acid Amplification or NAAT, or Polymerase Chain Reaction or PCR. Viral load tests are generally conducted once a sample is determined HIV positive; however, some labs may include viral load as confirmation.

All public and private test sites are required to use specific testing procedures to diagnose HIV infection.








## Slide 35 – Florida Bureau of Laboratories

DOH Required Training FY2013-2014

### Florida Bureau of Laboratories

<b>Samples</b> <ul style="list-style-type: none"> <li>• Whole Blood</li> <li>• Plasma</li> <li>• Oral</li> <li>• Dried Blood Spot</li> </ul>	<b>Tests</b> <ul style="list-style-type: none"> <li>• Immunoassay</li> <li>• Western Blot</li> <li>• Supplemental</li> <li>• NAAT</li> </ul>
--	--

35

For HIV screening and confirmation, The Florida Bureau of Laboratories, located in Jacksonville and Miami, accepts samples of whole blood drawn from a venipuncture, plasma, whole blood spun in a centrifuge, oral swab, also called OMT, collected from the mouth, and dried blood spots from a finger stick.

Tests used on these samples include antibody or antibody/antigen immunoassay, antibody Western blot, antibody supplemental, and antigen NAAT.

Additional tests on HIV-positive blood and plasma samples count the amount of virus in a sample and determine medication resistance and genetic appearance.

All samples sent to a lab must be properly obtained, stored and shipped to avoid receiving an unsatisfactory test result.

## Slide 36 - Blood and Plasma

DOH Required Training FY2013-2014

### Blood and Plasma

- Screening**

**Immunoassay**


  - Negative = NOT HIV antibody positive.
  - Positive = Go To Test 2,
- Antibody Confirmatory**

**Supplemental antibody**

  - Positive = HIV antibody positive
  - Negative = Go To Test 3,
- Antigen Confirmatory**

**Nucleic Acid Amplification (NAAT)**

  - Negative = HIV negative
  - Positive = Acute HIV infection



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The procedure used by the Florida Bureau of Laboratories for blood and plasma samples is very specific and follows these steps:

1. Samples are screened with an antibody/antigen combination immunoassay. If positive, the test does not make a distinction between antibodies or antigen, so, the sample is sent to step 2 for antibody confirmation.

2. If the supplemental is positive, the sample is reported as HIV antibody positive.

If the supplemental is negative, the sample goes to step 3 for antigen confirmatory with NAAT.

3. If NAAT is positive, the sample is reported as HIV antigen positive, indicating acute HIV infection or that the sample was obtained from a client during the window period. If NAAT is negative, the sample is reported as HIV negative.



## Slide 37 - Oral and Dried Blood Spots

DOH Required Training FY2013-2014

### Oral and Dried Blood Spots

#### 1. Screening



**Antibody Immunoassay**

- Negative = NOT HIV antibody positive
- Positive = Go to test 2,

#### 2. Confirmatory

**Western blot antibody confirmation results**

- Positive = HIV antibody positive
- Negative = HIV antibody negative
- Inconclusive = HIV antibody indeterminate

37

The procedure used by the Florida Bureau of Laboratories for oral samples is very specific.

1. Samples collected with an OraSure device, or as a dried blood spot, are screened with an antibody immunoassay test. If the screen is negative, the sample is reported as HIV antibody negative. If the screen is positive, a Western blot test is conducted for antibody confirmation.





2. Western blot can have three results. Positive is reported as HIV antibody positive, negative is reported as HIV antibody negative, and inconclusive is reported as HIV antibody indeterminate meaning that the test was not fully positive. Inconclusive tests indicate that the client must be tested again as quickly as possible.


This procedure does not determine acute infections. It is best at determining chronic or long term HIV infection.

Dried blood spots are collected by a finger stick usually for research purposes.

## Slide 38 - HIV Rapid Test Products

### HIV Rapid Test Products

<p><b>OraQuick</b></p> <ul style="list-style-type: none"> <li>Blood</li> <li>Oral</li> </ul> 	<p><b>Determine</b></p> <ul style="list-style-type: none"> <li>Blood</li> </ul> 
<p><b>Clearview</b></p> <ul style="list-style-type: none"> <li>Blood</li> </ul> 	<p><b>Insti</b></p> <ul style="list-style-type: none"> <li>Blood</li> </ul> 



38

HIV rapid antibody screening tests include products and technologies waived to be used outside of a laboratory. Reactive rapid test results from any product or technology must be confirmed by a laboratory-based testing procedure.

OraQuick ADVANCE is the only product approved for use with oral samples. A newly approved HIV rapid test available as an over the counter product is the same OraQuick ADVANCE test.

Other rapid products that are used in Florida include Clearview Complete, Insti, and Determine, the only rapid test that can detect HIV antibodies and antigen..

Only properly trained counselors may conduct HIV rapid tests. Not all sites are cleared to offer rapid testing and only a few offer OraQuick oral testing.




## Slide 39 - Publicly Funded Test Sites

DOH Required Training FY2013-2014

### Publicly Funded Test Sites

Florida Administrative Code 64D states that all publicly funded HIV test sites that hold themselves out to the public as providing HIV tests must:

- Be approved and registered
- Obtain consent before testing
- Follow requirements

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The Florida Administrative Code 64D establishes that all publicly funded HIV test sites that hold themselves out to the public as providing HIV testing must:

- Be approved by and registered with the Department of Health and renew registrations each year.
- Obtain informed consent before conducting tests. Informed consent must include information about reporting positive test results and laws that protect client privacy. The client should also be informed that anonymous testing is available in each county health department.
- Follow Florida statute, administrative code, OSHA, and site Technical Assistance guidelines established by the Centers for Disease Control and Prevention, the Florida Department of

## Slide 40 - HIV Test Sites

DOH Required Training FY2013-2014

### HIV Test Sites

- County Health Departments
- Community Organizations
- Hospital ER Services
- Churches
- Drug Treatment Centers
- Universities
- County Jails
- Community Health Centers




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Florida operates the largest publically funded HIV testing program in the US outside of the military. Tests are conducted at a variety of sites including county health departments, community-based and faith-based organizations, hospital emergency departments, churches, drug treatment centers, universities, county jails and detention services, and community health centers.







## Slide 41 - Counselor Expectations

DOH Required Training FY2013-2014

### Counselor Expectations

- Meet all counselor requirements found in the Department of Health *Technical Assistance HIV/AIDS 345-17-13*
- Attend annual HIV/AIDS 500/501 updates



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As an HIV testing counselor, you must meet all counselor requirements found in the Department of Health's *Technical Assistance Guideline HIV/AIDS 345-17-13 Minimum Standards for HIV Counselors, Trainers, and Early Intervention Consultants*, which can be located on the Department of Health website.

Additionally, counselors are expected to attend annual HIV/AIDS 501 updates provided by local county health departments.

## Slide 42 - HIV Testing Counselors

DOH Required Training FY2013-2014

### HIV Testing Counselors

- Help clients learn and understand their HIV status
- Remain proactive
- Represent agency and state



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HIV testing counselors are on the frontline and are often the first person to help clients learn and understand their HIV status. The Florida Department of Health encourages counselors to remain proactive and current with HIV and AIDS related information and technologies. Paid staff or volunteers, HIV testing counselors serve as representatives of both their agency and the state of Florida.





## Slide 43 – HIV Resources


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### HIV Resources

Additional information can be found on the web by searching:

- The HIV Tool Kit
- The Florida Department of Health
- The Centers for Disease Control and Prevention
- The Body
- The National HIV/AIDS Strategy

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Additional and more detailed information can be found on the websites for:

- The HIV Tool Kit from the National Institutes of Health
- The Florida Department of Health
- The Centers for Disease Control and Prevention
- The Body, and
- The National HIV/AIDS Strategy

The Internet is a well-spring of information that can provide resources on many different aspects of HIV and AIDS including testing, prevention, harm reduction, surveillance, wellness and treatments.

## Slide 44 - End of Section One


DOH Required Training FY2013-2014

### End of Section One

This concludes section one.

You must complete a section review before moving to section two.

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To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.

### End of Section One

This concludes Section One. You must complete a section review before moving to section two.

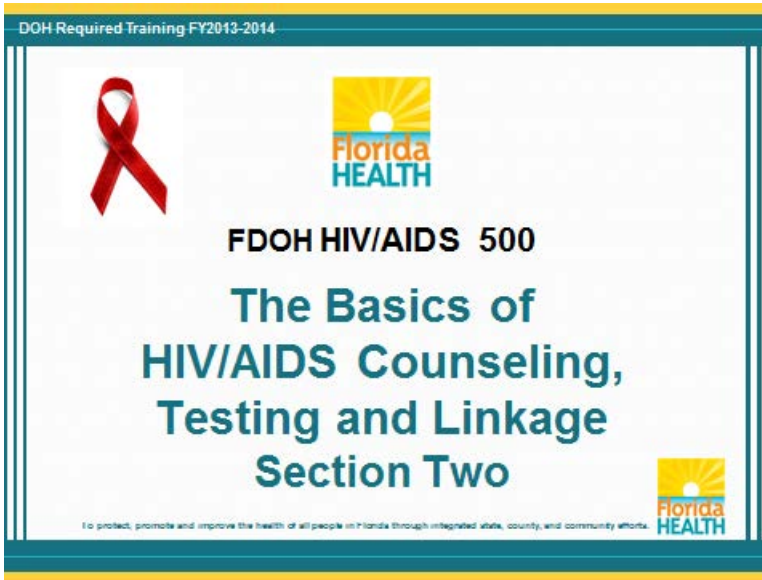






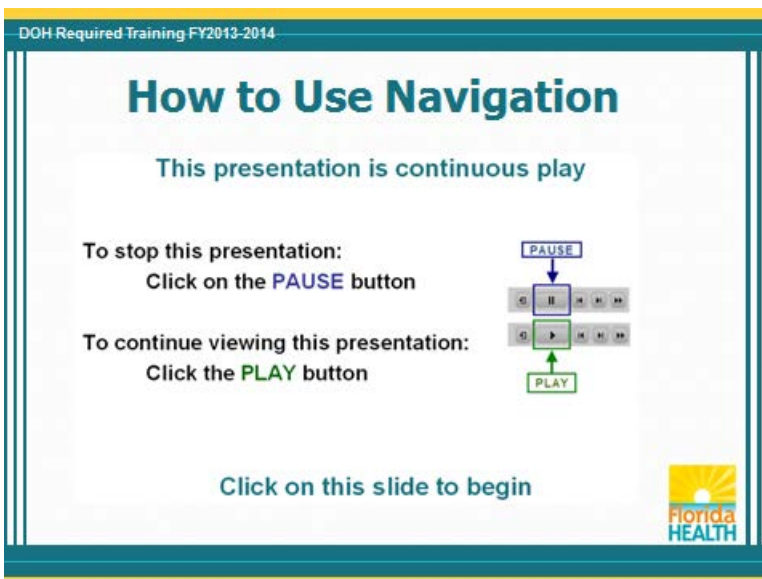
## Section Two

### Slide 1 - Welcome



The Florida Department of Health welcomes you to the FDOH HIV/AIDS 500 Course, The Basics of HIV/AIDS Counseling, Testing and Linkage, Section Two.

### Slide 2 – How to Use Navigation



As with the previous sections, if you need to stop the presentation, click on the PAUSE button, on the bottom left of the screen.

When you are ready to continue your viewing, click on the PLAY button on the bottom left of the screen.


To begin viewing this presentation you will need to click directly on **this** slide now.






### Slide 3 – HIV Transmission, Prevention and Treatments

DOH Required Training FY2013-2014



**Section Two**

## HIV TRANSMISSION, PREVENTION AND TREATMENTS



This section will cover the basics of HIV transmission, prevention and treatments.


This section will take about 40 minutes to complete.

### Slide 4 – Learning Objectives Section Two

DOH Required Training FY2013-2014

## Learning Objectives Section Two

- Understand the fundamentals and modes of HIV transmission
- Understand high-risk behavior
- Understand HIV prevention and harm reduction
- Understand the basics of HIV/AIDS treatments



4



After finishing this section participants will be able to:

- Understand the fundamentals and modes of HIV transmission
- Understand high-risk behavior
- Understand HIV prevention and harm reduction
- Understand the basics of HIV/AIDS treatments.




## Slide 5 – HIV Transmission and Prevention

DOH Required Training FY2013-2014



Section Two

### HIV Transmission and Prevention




This part of Section Two will cover HIV transmission and prevention.

## Slide 6 – Exposure to HIV

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### Exposure to HIV

- Exposure does not necessarily lead to infection
- Transmission co-factors
  - Immune system strength
  - Amount of HIV injected into the bloodstream
  - Co-infections with other diseases
  - HIV entry directly into the bloodstream through a break in the skin or mucus lining



Exposure to HIV does not necessarily lead to HIV infection. The ease or difficulty of HIV transmission from an exposure depends on conditions called co-factors.

These include:

- Immune system strength
- The amount of HIV injected into the bloodstream
- Co-infection with other diseases, and
- HIV gaining entry directly into the bloodstream through a break in the skin or mucus lining.




## Slide 7 – Exposure to HIV

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### Exposure to HIV

- A person must be exposed to a certain amount of HIV before becoming infected
- Possible to have multiple contacts and not become infected
- It is unknown exactly how much or how many contacts it takes to cause infection
- Every circumstance is different




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A person must be exposed to a certain amount of HIV or viral load before becoming infected. It is possible to have multiple sexual contacts with an HIV-infected individual, be exposed to the virus, and not become infected. It is also possible to become infected from a single contact. It is unknown exactly how much virus or how many contacts it takes to cause infection. Every immune system, HIV and circumstance is different.



## Slide 8 - HIV Transmission

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### HIV Transmission



- Blood from anyone
- Semen from men
- Vaginal fluids from women
- Breast milk from women to nursing infants
- Amniotic fluid
- Cerebral fluids

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HIV is transmitted or passed from person to person through certain bodily fluids. These include:

- Blood from anyone
- Semen, including pre-ejaculatory fluid from men
- Vaginal fluids from women, and
- Breast milk from women to nursing infants.

It can also be found in other fluids such as:

- Amniotic (fetal) fluid
- Cerebral and spinal fluids surrounding the central nervous system.






## Slide 9 – Modes of HIV Transmission

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### Modes of HIV Transmission



**Sexual Transmission**

- Vaginal
- Anal
- Oral



**Blood-to-Blood Transmission**

- Sharing injection needles
- Tattooing or piercing
- Sharing razor blades
- Receiving blood or blood products

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Modes of HIV transmission are sexual and blood to blood.

During sexual transmission, HIV is passed from an infected person to a non-infected person primarily through unprotected vaginal, anal and possibly oral sex contact. Although oral sexual infection is less common, protection is advised to be used during oral sex because it may involve direct contact with high-risk fluids. Blood-to-Blood transmission can happen while sharing injection needles or syringes. Other means of blood contact include: tattooing and/or piercing, sharing razor blades and receiving infected blood or blood products such as plasma or blood factors.


## Slide 10 – Modes of Transmission

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### Modes of Transmission



**Mother-to-Child**

- During pregnancy
- Vaginal delivery
- Breastfeeding



**Occupational**

- Work activities
- Blood, plasma, amniotic, cerebral/spinal fluid

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An infected woman can pass HIV to her baby during pregnancy, during vaginal delivery, or through breastfeeding. Risk increases if the mother becomes infected with HIV while breastfeeding because of a potentially high maternal viral load.

Occupational exposure refers to medical and emergency work activities that place a person at risk and expands the number of risky bodily fluids to include blood, plasma, amniotic and cerebral/spinal fluids.



## Slide 11 – HIV is NOT Transmitted

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### HIV is NOT Transmitted

**Casual contact**

- Hugging
- Shaking hands

**Indirect contact**

- Toilet seats
- Swimming pools
- Utensils
- Insects

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HIV is not transmitted by casual contact such as; hugging or shaking hands; and not from indirect contact from toilet seats, swimming pools, utensils, or by insects like mosquitoes.

After 30 years of research, it can clearly be stated that almost all reported cases of HIV were obtained either through unprotected sexual contact or direct blood-to-blood contact.

## Slide 12- Human Nature


DOH Required Training FY2013-2014

### Human Nature



It is human nature to have an illusion of invulnerability and thoughts that bad things only happen to others.

Yet...



Even though The Centers for Disease Control and Prevention estimate that a substantial number of people, about 50,000, are infected with HIV each year in the United States, it remains human nature to have an illusion of invulnerability and thoughts that bad things only happen to others. Yet...

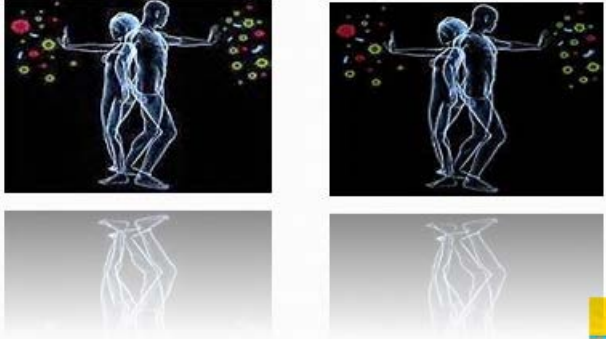





### Slide 13 – Preventing HIV Can be Simple

DOH Required Training FY2013-2014

## Preventing HIV Can be Simple

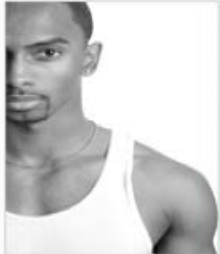

Preventing HIV transmission can be simple.

### Slide 14 – Keys to HIV Prevention

DOH Required Training FY2013-2014

## Keys to HIV Prevention

- Increasing knowledge
- Knowing your status
- Knowing partner's status
- Using protection
- Never sharing needles
- Reducing number of partners
- Abstinence

The keys to HIV prevention include:

- Increasing your knowledge of HIV, AIDS, hepatitis and sexually transmitted diseases
- Knowing your HIV status
- Knowing your partner's HIV status
- Using barrier protection with every sexual encounter
- Never sharing needles or other objects that may have blood on or in them
- Reducing your number of sex and drug sharing partners, and/or
- Engaging in sexual and drug sharing abstinence






## Slide 15 – Sexual Contact

DOH Required Training FY2013-2014

### Sexual Contact

- Number one mode of transmission
- Sexual expression is normal
- Knowledge is power
- Sexual negotiation builds trust
- Talk about HIV and safer sex
- Honest and open communication

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Worldwide, sexual contact is the number one mode of transmission for HIV.

Understanding that sexual expression is a normal human behavior, that knowledge is power and that sexual negotiation builds trust between partners will make it easier for partners to talk about HIV, sexually transmitted diseases and safer sex practices to reduce the risks of HIV and other sexually transmitted diseases.

Honest and open communication between partners about safer sex, such as the use of condoms and other protective measures, will go far to reduce these risks.

## Slide 16 – Safer Sex Practices

DOH Required Training FY2013-2014

### Safer Sex Practices




Safer sex practices refers to behavior choices that reduce the risk of HIV transmission. These choices include:

- Abstinence
- Mutual Monogamy
- Barrier Methods




## Slide 17 – Safer Sex Practices Abstinence

DOH Required Training FY2013-2014

### Safer Sex Practices

Abstinence

- Refraining from sexual activity
- Eliminates chances of infection



Abstinence is refraining from sexual activity with other people. If practiced consistently, it is a behavior that virtually eliminates chances of infection with HIV or other sexually transmitted diseases.


## Slide 18 – Safer Sex Practices Mutual Monogamy

DOH Required Training FY2013-2014

### Safer Sex Practices

- Both partners
- Only have sex with each other
- Reduces risk of infection

Mutual Monogamy



Mutual Monogamy means that both partners in a relationship have sex only with each other. Having sex with only one partner reduces risk of infection.




## Slide 19 – Barrier Methods

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### Safer Sex Practices

- Placing a barrier between both partners
- Block fluid exchanges
- Proper use of condoms is highly effective

Barrier Methods



Safer sex practices include the use of barrier methods, which means placing a barrier, such as a condom, between both partners to block fluid exchanges. Study after study has concluded that the proper use of condoms is highly effective at preventing pregnancy and most sexually transmitted diseases, including HIV.

## Slide 20 – Condoms as Barriers

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### Condoms As Barriers

- Use consistently and correctly
- Various types and brands available
  - Male
    - Latex
    - Polyurethane
  - Female
    - Polyurethane




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When used consistently and correctly, condoms play an important role in reducing the risk of infection.

There are various types and brands of condoms available. The most commonly used are male latex condoms. However, plastic or polyurethane condoms, found to be a little stronger than latex, are practical choices for those who may have a latex allergy.

As a method initiated by a woman, female polyurethane condoms are important tools for women who cannot negotiate male condom use due to personal or cultural restraints. All condoms take practice to use, and to avoid conflict, partners should know ahead of time that a condom will be used.





## Slide 21 – Condom Mistakes

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### Condom Mistakes

- Used after sexual contact
- Put on incorrectly
- Stored incorrectly
- Incorrectly lubricated
- Using two condoms
- Used beyond expiration date




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- Incorrect use causes condoms to fail. Common mistakes include:
- Not putting the condom on before sexual contact occurs.
  - Putting on the condom incorrectly; for example, not completely unrolling it or putting it on inside out then removing it and turning it right side out.
  - Storing them incorrectly; left in extreme heat or cold.
  - Incorrectly lubricated. Only water or silicone based lubricants can be used with latex condoms.
  - Using two condoms at the same time.
  - Using a condom beyond its expiration date.

## Slide 22 – Drug Abuse

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### Drug Abuse

- Illegal drugs (not prescribed)
- Legal drugs (prescription)
- Alcohol
- Injected (IDU)
- Ingested (swallowed)
- Inhaled (snorted)
- Absorbed (skin, mucus membrane, under the tongue)





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Drug abuse can happen with:

- Illegal drugs that are not prescribed
- Legal drugs that are prescribed and
- Legal or illegally obtained alcohol.

Drugs can be:

- Injected, also called injection drug use or IDU
- Ingested or swallowed
- Inhaled or snorted and
- Absorbed on the skin, mucus membrane or under the tongue




## Slide 23 – Drug Abuse

DOH Required Training FY2013-2014

### Drug Abuse

- Injection drug use (IDU)
  - Intravenous
  - Intramuscular
  - "Works"
- Legal drugs
  - Prescription drugs
  - Alcohol
- Street drugs
  - Anything sold by someone other than a pharmacist

23



Injection Drug Use, or IDU, can be intravenous (injecting into a vein) or intramuscular (injecting into a muscle). IDU equipment or paraphernalia is called "works". If shared, a user's "works" can be contaminated with HIV, hepatitis or other diseases. Common IDU drugs include heroin and cocaine, but most anything can be injected.

Legal drug abuse includes prescription drugs and alcohol. In 2012, Florida tightened prescription drug laws to curb abuse; however, alcohol abuse continues to be widespread.


Street drugs are anything sold by someone other than a pharmacist and may include methamphetamine or meth, "bath salts" and ecstasy.

## Slide 24 – Drug Abuse


DOH Required Training FY2013-2014

### Drug Abuse

- Drug abuse can create high risk
- Drug abuse affects judgement
- Abusers may support their addiction by exchanging sex for drugs



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All drug abuse can create situations of high risk for HIV and other blood-borne diseases because drug abuse affects judgement. Elevating this risk, abusers may support their addiction by exchanging sex for drugs.






## Slide 25 – Drug Abuse and Prevention


DOH Required Training FY2013-2014

### Drug Abuse and Prevention

Blood-to-blood is the most efficient means of transmission



Sharing injection works is the most efficient mode of transmission



25

Blood-to-blood contact is the most efficient means of HIV transmission. Sharing injection equipment is the most efficient mode of HIV blood-to-blood transmission.

You can look at prevention efforts aimed at drug abusers in levels.


## Slide 26 – Drug Abuse and Prevention First Level

DOH Required Training FY2013-2014

### Drug Abuse and Prevention

First Level: Prevention

- Prevent drug abuse behavior
- If it happens, treat the addiction



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The first level is to prevent drug abuse behavior in the first place, and if it happens, treat the addiction through substance abuse programs.



## Slide 27 – Drug Abuse and Prevention Second Level


DOH Required Training FY2013-2014

### Drug Abuse and Prevention

#### Second Level: Harm Reduction

- Discouraging sharing of needles and works
- Using clean needles
- Initiating community syringe exchange programs called SEP

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The second level is specific to IDU behavior and is called harm reduction, which is accomplished by:

- Discouraging the sharing of needles and works
- Using clean needles by teaching clients to clean them with a mixture of bleach and water or just water and
- Initiating community syringe exchange programs called SEP, which as of this writing are not legal in Florida.

## Slide 28 – Occupational Exposure

DOH Required Training FY2013-2014

### Occupational Exposure

Health care workers at risk

- Doctors
- Nurses
- Phlebotomists
- Lab technicians
- Emergency responders

Universal precautions  
Source testing  
Risk management



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Occupational exposure to infections poses a risk for anyone who comes in contact with blood or blood products due to the work they perform. Health care workers at risk include; doctors, nurses, phlebotomists, lab technicians and emergency responders.

Anyone in these fields, or any field that exposes a person to blood, should clearly understand the risks associated with direct contact with blood. This is why hospitals and other healthcare agencies have policies regarding Universal Precautions, including hand washing, protective barriers, proper use and disposal of needles, cleaning and disinfecting.

Source testing a person who may have exposed a health care worker to potential infection is allowed by state law. Health care workers can contact their risk management office for additional information.




## Slide 29 – Risk Probabilities

DOH Required Training FY2013-2014

### Risk Probabilities

- Needle stick 1 in 300
- Mucous membranes 1 in 1,000
- Assume any client or patient could be HIV infected
- Use proper precautions for all HIV test samples

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The risk of HIV infection from a needle stick is high, about 1 in every 300 sticks. The risk of HIV infection through exposure to mucous membranes is less than 1 in every 1,000 contacts.

The CDC advises health care workers to assume that any client or patient could be infected with HIV and/or hepatitis and take appropriate precautions by following universal precautions and local protocols.


Proper precautions for HIV testing in any setting are also advised for all test samples - whole blood, plasma, finger stick, dried blood spots and oral.

## Slide 30 – Mother-to-Child Transmission


DOH Required Training FY2013-2014

### Mother-to-Child Transmission

- Perinatal HIV transmission
  - Before birth
  - At birth
  - After birth
- Medications reduce infection 2% or less
  - Without preventative measures, 25 to 30 percent of all babies born to infected mothers will be infected



30



Perinatal HIV transmission refers to infection passed from mother to baby before, during, or after the birth process. Not all babies born to HIV-positive mothers will actually have HIV, but all babies born to infected women are born with HIV antibodies and will test antibody positive.

When an infected woman takes anti HIV medications during pregnancy and at delivery and if the newborn also receives medication for the first six weeks of life, the chances of HIV transmission are reduced to two percent or less.

Without preventative measures, about 25 to 30 percent of all babies born to infected mothers in the United States will be infected.





## Slide 31 - TOPWA

DOH Required Training FY2013-2014

### TOPWA

- Mission: reach high-risk women to assist with accessing prenatal care and other services that lower risk for HIV infection and for substance abuse

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Florida has reduced the number of HIV-infected newborns due to a program called Targeted Outreach for Pregnant Women Act, or TOPWA. The mission of TOPWA is to reach high-risk women and HIV-infected pregnant women to assist with accessing prenatal care and other services that lower their risk for HIV infection and for substance abuse.

TOPWA has been a success. The number of HIV-infected babies born in Florida has steadily declined. However, one infected baby is one too many and efforts to expand HIV testing to women without access to prenatal care are still needed.


## Slide 32 – Pediatric HIV Infection

DOH Required Training FY2013-2014

### Pediatric HIV Infection



- HIV infection in children under 13 years of age
  - Florida is second in the number of pediatric HIV cases
  - Can be treated with antiretroviral therapies
  - HIV can become a manageable condition
  - Infected children can live decades



32

Pediatric HIV infection refers to HIV infection in children under 13 years of age.

Florida is ranked second, behind New York, in the number of diagnosed pediatric HIV cases.

Children who become HIV infected can also be treated with antiretroviral therapies. Pediatric dosages and monitoring tests are different from those for adults. With early diagnosis and proper treatment, HIV in children can become a manageable condition; and HIV-infected children can live for many years to decades.

With clear and understandable prevention information, these children can grow into healthy adults who will not transmit HIV to their partners or children.









### Slide 33 – Prevention Plans

DOH Required Training FY2013-2014



## Prevention Plans

It is important to become familiar with statewide HIV prevention plans developed by local stakeholders and enacted by the Florida Department of Health.



#### Plans and Policies


It is important for all HIV testing counselors to become familiar with statewide HIV prevention plans developed by local stakeholders and enacted by the Florida Department of Health.

### Slide 34 – Prevention Plans

DOH Required Training FY2013-2014

## Prevention Plans

The Florida Jurisdictional HIV Prevention Plan and HIV Community Planning Guide can be found on the website of the Florida Department of Health



The Florida Jurisdictional HIV Prevention Plan and the HIV Community Planning Guide can be found on the website of the Florida Department of Health.



## Slide 35 – HIV Antiretroviral Treatments

DOH Required Training FY2013-2014



Section Two

### HIV Antiretroviral Treatments



This part of section two will cover antiretroviral treatments or ART.

## Slide 36 – Antiretroviral Treatments

DOH Required Training FY2013-2014

### Antiretroviral Treatments

ART limits HIV's ability to:



- Enter cells
- Replicate
- Leave as an intact virus

ART is:

- More than 30 medications

ART has:

- Specific requirements and side effects

36

The US Food and Drug Administration, or FDA, has approved a variety of antiretroviral treatments, or ART, that limit HIV's ability to:

- Enter human cells
- Replicate inside cells or
- Leave the cells as an intact and viable virus.

ART is more than 30 medications and has specific dosing requirements and possible side effects.





## Slide 37 – Antiretroviral Treatments

DOH Required Training FY2013-2014

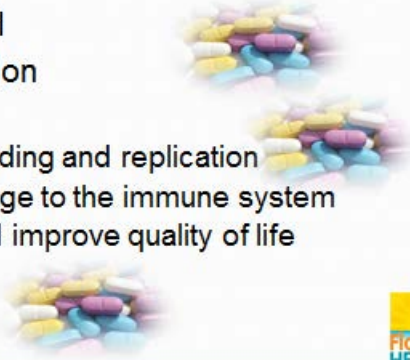

### Antiretroviral Treatments

Drawback to ART is resistance

- Rotational
- Combination

Goals of ART

- Control binding and replication
- Limit damage to the immune system
- Extend and improve quality of life

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A drawback to ART is medication resistance. To minimize resistance, physicians use rotational and combination therapy with medications from the same or different classes of ART as a way of keeping HIV off balance.



The goals of ART are to control HIV binding onto CD4 cells, block viral replication and limit damage to the immune system. ART is not a cure, but it can extend and improve quality of life.

## Slide 38 – ART Medication Classes

DOH Required Training FY2013-2014

### ART Medication Classes

RT Inhibitors	Other Inhibitors
<ul style="list-style-type: none"> <li>• Nucleoside Analogues</li> <li>• Nucleotide Inhibitors</li> <li>• Non-Nucleoside Inhibitors</li> </ul>	<ul style="list-style-type: none"> <li>• Protease Inhibitors</li> <li>• Integrase Inhibitors</li> <li>• Fusion Inhibitors</li> </ul>

ART medications are divided into classes. These include:

Reverse Transcriptase Inhibitors composed of:

Nucleoside Analogues, Nucleotide Inhibitors and Non-Nucleoside Inhibitors. These drugs, commonly called nukes, enter HIV's core to block an HIV enzyme called reverse transcriptase, or RT, which helps HIV replicate within a CD4 cell.

Other HIV enzyme inhibitors are:

Protease and Integrase Inhibitors that target specific HIV enzymes called protease and integrase and, Fusion Inhibitors that block HIV from binding onto a CD4 cell.




## Slide 39 – Common ART Medications

DOH Required Training FY2013-2014

### Common ART Medications

Combivir	Retrovir
Complera	Stribild
Epivir	Sustiva
Fuzeon	Truvada
Kaletra	Viracept
Norvir	Viread

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Understanding that new medications are frequently added to formularies, this slide shows a list of twelve common ART medications as of January 2013.

These medications are:

Combivir, Complera, Epivir

Fuzeon, Kaletra, Norvir

Retrovir, Stribild, Sustiva

Truvada, Viracept, and Viread


## Slide 40 – Quick Reference Guide

DOH Required Training FY2013-2014

### Quick Reference Guide

- HIV testing counselors should become familiar with ART and why these meds are prescribed.
- Test sites should have a quick reference guide available for discussing ART with a client.

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HIV testing counselors should become familiar with ART and why these meds are prescribed. Test sites should have a quick reference guide available when discussing ART with a client.





## Slide 41 – Combination and Rotation

DOH Required Training FY2013-2014

### Combination and Rotation

Prescribed in combinations  
Often rotated  
All ART subject to interactions  
Adverse reactions  
Must be closely monitored

41

Anti HIV medications are prescribed in combinations and are often rotated in an attempt to keep HIV from circumventing the medication effects. All ART courses of therapy are subject to drug interactions and adverse reactions and must be closely monitored by a physician.


## Slide 42 – Pre-Exposure Prophylaxis

DOH Required Training FY2013-2014

### Pre-Exposure Prophylaxis


**PrEP**

- Preventative medication
- Combination with safer sex
- Reduces transmission
- Adults at high risk



**Truvada**

- FDA approved PrEP
- High-risk MSM
- Serodiscordant couples



42

Prophylaxis means a preventative measure. PrEP is a way of offering HIV pre-exposure prophylaxis through HIV-specific antiviral medications. When used in combination with safer sex, PrEP reduces sexually transmitted HIV for adults at high risk. Truvada, its self a combination of 2 ART medications, is the FDA approved PrEP medication. Clinical trials indicate that PrEP should be prescribed to those at high risk; men who have sex with men and heterosexual serodiscordant couples. Serodiscordant is when one partner is HIV infected and the other is not.






Slide 43 – End of Section Two


DOH Required Training FY2013-2014

## End of Section Two

This concludes section two. You must complete a review before moving to section three.



To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.



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This concludes section two. You must complete a section review before moving to the section three.

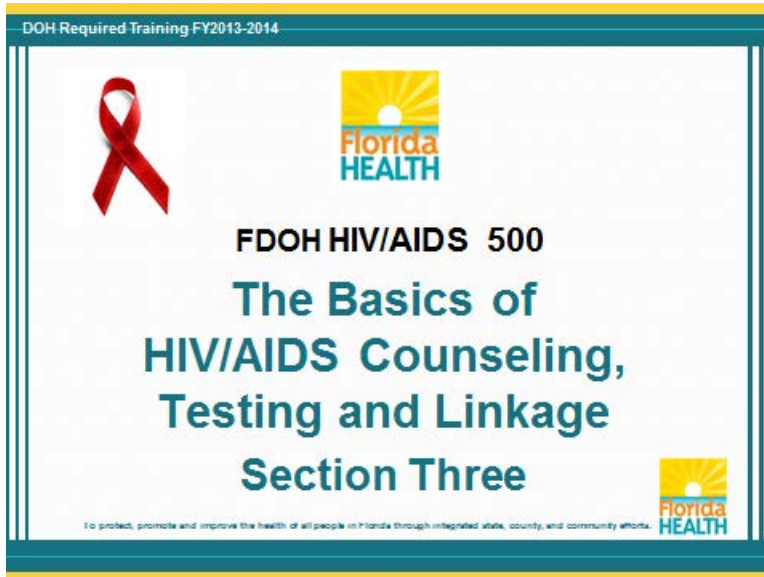






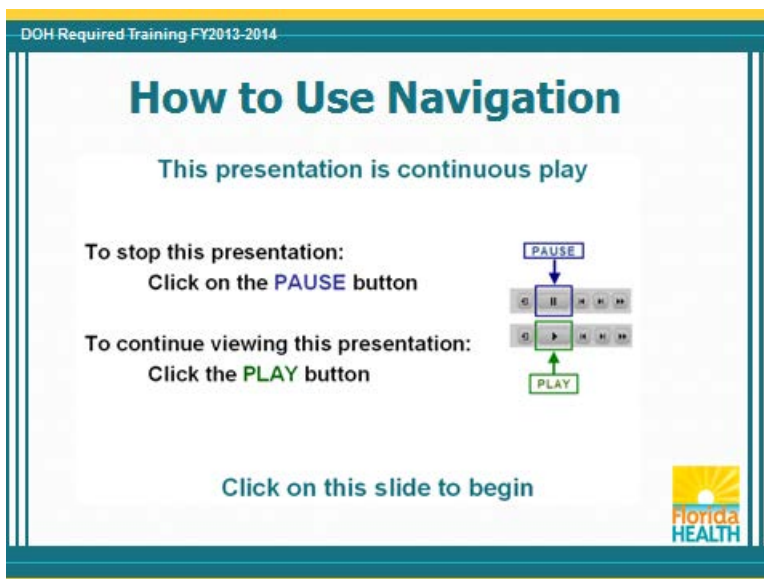
### Section Three

#### Slide 1 - Welcome



The Florida Department of Health welcomes you to the FDOH HIV/AIDS 500 Course, The Basics of HIV/AIDS Counseling, Testing and Linkage, Section Three.

#### Slide 2 – How to Use Navigation



By now, you know the scoop about how to use navigation

If you need to stop the presentation, click on the **PAUSE** button. .

When you are ready to continue your viewing, click on the **PLAY** button.

To begin viewing this presentation you will need to click directly on **this** slide now or click the forward button.










### Slide 3 – Counseling, Testing and Linkage

DOH Required Training FY2013-2014



**Section Three**

**Counseling, Testing and Linkage**



Section Three will cover the core elements of HIV counseling, testing and linkage to care. It is important that all HIV testing counselors have an understanding of these important HIV prevention components. Additional information about each element is offered in the accompanying classroom HIV/AIDS 501 course.


This section will take about 40 minutes to complete.

### Slide 4 – Learning Objectives Section Three

DOH Required Training FY2013-2014

**Learning Objectives Section Three**

- Understand basic concepts of HIV testing, counseling and linkage
- Understand Florida's HIV testing program
- Know the difference between lab-based and waived testing
- Understand important post-test steps for an HIV-positive client or patient



4

After finishing this section participants will:

- Understand basic concepts of HIV testing, counseling and linkage
- Understand Florida's HIV testing program and procedures
- Know the difference between lab-based and waived testing
- Understand important post-test steps for an HIV-positive client or patient.




## Slide 5 – HIV Prevention Counseling

DOH Required Training FY2013-2014

### HIV Prevention Counseling

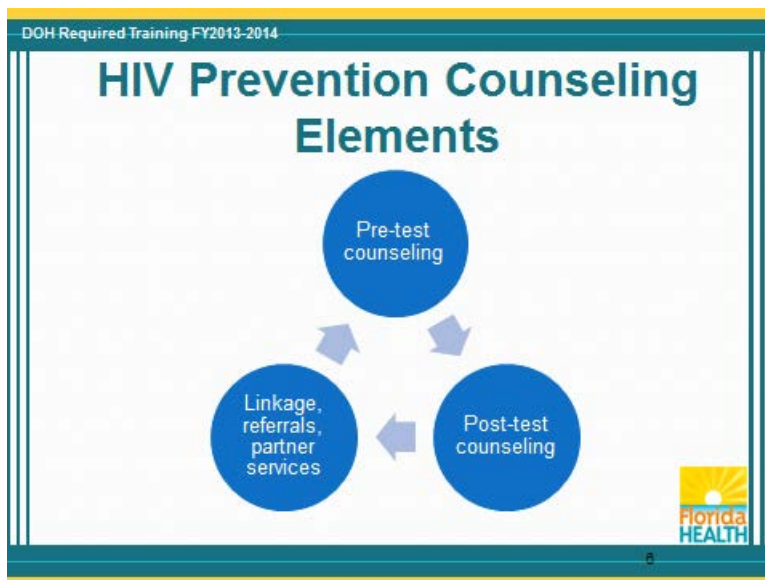
HIV prevention counseling is conducted, depending on the site and the client's status, at any point in the testing process during pre-test and post-test sessions or when offering linkage and referrals, or when offering partner services.



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HIV prevention counseling is conducted, depending on the site and the client's status, at any point in the testing process during pre-test and post-test sessions or when offering linkage and referrals, or when offering partner services.

## Slide 6 – HIV Prevention Counseling Elements



HIV prevention counseling elements are: pre-test counseling; post-test counseling; and linkage, referrals and partner services.

Pre-test counseling in the context of HIV prevention counseling is a continuation of the risk assessment.

Post-test counseling is when test results are given regardless of the outcome, and further sampling may be done.

Linkage to care, referrals to services and partner services are offered to clients who are rapid test reactive, or lab test positive, or otherwise at risk or in need of services.





## Slide 7 – HIV Prevention Counseling

DOH Required Training FY2013-2014

### HIV Prevention Counseling

- HIV risk assessments, pre-test and post-test counseling sessions
- Primary goal is risk reduction
- Individualized risk-reduction plan that is concrete, acceptable and achievable



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HIV prevention counseling should be used while obtaining an HIV risk assessment and in pre-test and post-test counseling sessions. The primary goal of HIV prevention counseling is risk reduction brought about through an in-depth personalized assessment and negotiation of an individualized risk-reduction plan that is concrete, acceptable and achievable.

## Slide 8 – HIV Prevention Counseling

DOH Required Training FY2013-2014

### HIV Prevention Counseling

- Sessions should be tailored to address personal risk rather than providing a predetermined set of information.
- Counseling should not be a barrier to testing.
- Focusing on increased testing should not be a barrier to effective counseling services for at-risk clients.



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Counseling sessions should be tailored to address the personal risk of the client rather than providing a predetermined set of information unrelated to the client's situation.



Counseling should not be a barrier to HIV testing. Likewise, focusing on increased HIV testing should not be a barrier for the provision of effective HIV counseling services for at-risk clients.



## Slide 9 – HIV Prevention Counseling

DOH Required Training FY2013-2014

# HIV Pre-Test Counseling



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The next few slides will cover pre-test counseling.

## Slide 10 – Pre-Test Counseling

DOH Required Training FY2013-2014

# Pre-Test Counseling

- Continuation of the risk assessment
- Exploration of previous attempts to reduce risk
- Identification of successes and challenges
- Encouraged to commit to a single, explicit step to reduce their risk



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Pre-test counseling is a continuation of the risk assessment that includes an exploration of previous attempts to reduce risk, and identification of successes and challenges in previous risk reduction. Clients should be encouraged to commit to a single, explicit step to reduce their risk. Clients are more likely to take ownership of a concise risk reduction plan that they developed based on risk information that they identified.







Slide 11 – Pre-Test Counseling Elements

DOH Required Training FY2013-2014

## Additional Elements



- History of STD, hepatitis, TB and sexual assault/domestic violence
- Attempts to reduce risk
- Identify successes and challenges



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Counselors should explain how the client's confidentiality will be maintained and how the site protects confidential information. An addition, counselors should help clients explore and determine the following:



- The client's reason for testing
- The client's testing history and knowledge of HIV including:
  - The client's perception of risk and
  - The influence of substance use or abuse on the client's risk

Slide 12 – Additional Elements

DOH Required Training FY2013-2014

## Pre-Test Counseling Elements

- Explain confidentiality and determine:
  - Reason for testing
  - HIV testing history and knowledge of HIV
  - Perception of risk
  - Influence of substance use or abuse

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Additional Elements

- Assess client's history of sexually transmitted diseases (STD), hepatitis, tuberculosis (TB), sexual assault and domestic violence
- Discuss attempts to reduce risk, including the use of condoms
- Identify successes and challenges with risk reduction and assess partner risk







## Slide 13 – HIV Testing Model Protocols

DOH Required Training FY2013-2014

### HIV Testing Model Protocols

- Healthcare CHD clinics
  - Provide opportunity for pre-test counseling
- Healthcare not CHD settings
  - Pre-test counseling is not required
- Non-Healthcare programs
  - Must provide clients with pre-test counseling prior to conducting an HIV test

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Pre-test counseling is described in the Florida HIV Technical Assistance Guidelines and HIV Testing Model Protocols.

County health department clinics that offer healthcare services must provide clients the opportunity for pre-test counseling prior to testing for HIV. For other healthcare settings, pre-test counseling is not required.

Non-healthcare sites, such as non-clinical county health department testing programs, community-based organizations, outreach settings and mobile vans must provide HIV pre-test counseling prior to testing for HIV.

## Slide 14 – HIV Post-Test Counseling

DOH Required Training FY2013-2014

### HIV Post-Test Counseling

Post-test counseling

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The next few slides will cover post-test counseling.



## Slide 15 – Post-Test Counseling

DOH Required Training FY2013-2014

### Post-Test Counseling

- Ensure reasonable efforts to inform clients of test results
- Healthcare settings should provide clients with information on test results
- Recommended that providers conduct face-to-face counseling when a client tests positive



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Test sites should ensure that all reasonable efforts are made to inform clients of their test results. Healthcare settings should provide clients with information on their test results. Although face-to-face post-test counseling is not required in healthcare settings, it is recommended that providers conduct such a session when a client tests positive.

## Slide 16 – Post-Test Counseling

DOH Required Training FY2013-2014

### Post-Test Counseling

- County health department clinic sites must provide opportunity for face-to-face post-test counseling
- Clients testing in non-healthcare settings must be provided with face-to-face post-test counseling.
- Test results for all sites should remain in the client's records.



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County health department clinics must provide the opportunity for face-to-face post-test counseling.

Clients tested in non-healthcare settings must be provided face-to-face post-test counseling. Test results for all sites should remain in the client's record.





## Slide 17 – Linkage, Referrals, Partner Services

DOH Required Training FY2013-2014

# Linkage, Referrals, Partner Services

Linkage, referrals, partner services



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The next few slides will cover linkage, referrals and partner services.


## Slide 18 – Important Post-Test Steps

DOH Required Training FY2013-2014

# Important Post-Test Steps

For HIV-positive or rapid reactive clients:

- Direct linkage to medical care
- Referrals to case management
- Referrals to social services
- Partner Services



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Important post-test steps for HIV-positive or rapid reactive clients are:

- Direct linkage to appropriate medical care as quickly as possible
- Referrals to case management
- Referrals to social services and
- Partner Services provided by local health department Disease Intervention Specialists, or DIS.



## Slide 19 – Many Years of Research...

DOH Required Training FY2013-2014

### Many Years of Research...

**For HIV-positive clients:**

-  The sooner a person is in care
-  Manageable HIV infection
-  More likely they remain in care
-  The best service possible

Florida HEALTH

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Many years of research has taught us that the sooner an HIV-positive person is in medical care, the more manageable their HIV infection will be over their life time, and the more likely they will remain in care. These steps are key to providing clients, their partners and their community, the best service possible.

## Slide 20 Linkage Verses Referrals

DOH Required Training FY2013-2014

### Linkage Verses Referrals

**Linkage**

- Direct connection with follow-up to care for presumptive positive and confirmed positive persons.

**Referrals**

- More passive connections for high-risk HIV-negative or HIV-positive clients
- Domestic violence
- Statewide listings available

Florida HEALTH

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It is important to make a distinction between linkage and referrals.

Linkage is giving a presumptive or confirmed positive person a direct connection with follow-up to medical care. It also includes follow-up to ensure the client attended their initial appointment. Referrals are more passive connections to services or case management for high-risk HIV-negative or HIV-positive clients. Counselors should remain alert to any indication of domestic violence as relayed by a client and make appropriate referrals. Referrals can be made for clients, significant others, and/or family members. Statewide listings are available from the local health department, the Florida HIV/AIDS Hotline or any local 211 information service.







## Slide 21 – Prevention Counseling Recap

DOH Required Training FY2013-2014

### Prevention Counseling Recap

- Interactive and client-centered approach
- Aimed at personal risk reduction
- Specific behavior changes
- Create concrete and achievable goals
- Tailored to personal risk
- Reduce transmission and stigma



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Since 1993, the CDC has recommended the use of interactive and client-centered counseling during HIV prevention counseling sessions.

Aimed at personal risk reduction, these sessions address specific behavior changes through concrete and achievable goals tailored to personal risks. This approach has shown in reducing HIV transmission among those at high risk and has aided in reducing HIV associated stigma.

## Slide 22 – Informed Consent


DOH Required Training FY2013-2014

### Informed Consent

Must be documented before conducting an HIV test

Exceptions:

- Testing is required by law or rule
- Court ordered testing
- Medical emergencies or monitoring
- Unable to make informed judgement
- Certain circumstances related to exposure



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Informed consent must be documented before conducting an HIV test with exceptions. These include:

- When testing is required by law or rule, such as when a person commits certain crimes, is an inmate, testing is requested by a medical examiner, or for pregnant women
- When a court orders testing
- During or after medical emergencies or monitoring
- When a client is unable to make an informed judgement and
- When there are certain circumstances related to significant exposure to HIV.






## Slide 23 – Informed Consent

DOH Required Training FY2013-2014

### Informed Consent

Documentation can be on a form from the Florida Department of Health, or in a medical record. Should include:

- Explanation of confidentiality
- Anonymous testing is available (when personal or contact information is not given to the test site)
- Reporting requirements



23

Documentation of informed consent can be on a form issued by the Florida Department of Health or in a medical record. Clients should be informed of:

- Test confidentially
- That anonymous testing is available; this is when personal or contact information such as name, address, social security number or other identifying information is not given to the test site and
- That the state of Florida has test reporting requirements including the names of all who test HIV positive. Names are reported for medical information and record purposes, and for partner notification. Names of HIV-positive clients are not given to the federal government and are protected under Florida law.




## Slide 24 – Florida's HIV Testing Program

DOH Required Training FY2013-2014

### Florida's HIV Testing Program

Largest publicly funded HIV test program in the United States  
Documents over 400,000 tests each year  
About 1% are newly HIV positive  
Tests are confidential or anonymous

- Anonymous testing at CHDs
- Anonymous testing has become rare



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Florida operates the largest publicly funded HIV testing program in the United States outside of the military and documents over 400,000 HIV tests from registered sites each year, about 1% of which are newly identified as HIV positive.

Tests are conducted as confidential or anonymous. Anonymous testing is offered at county health departments and has become rare, indicating a fade in HIV stigma and recognition of AIDS as a chronic disease.



## Slide 25 – Florida's HIV Testing Program

DOH Required Training FY2013-2014

### Florida's HIV Testing Program

Program objectives:

- Help people know their HIV status
- Offer prevention information
- Identify those who are HIV infected
- Link into care and services as quickly as possible

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Florida's HIV Testing Program objectives are:

- Help people know their HIV status
- Offer prevention information that can be shared with their peers
- Identify those who are HIV infected and
- Link them into care and services as quickly as possible





## Slide 26 - Florida HIV Test Sites

DOH Required Training FY2013-2014

### Florida HIV Test Sites

- Sites must register
- Rapid testing offered by some sites
- Point of contact is the local Early Intervention Consultant
- All HIV client records are protected by Florida's confidentiality laws



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In Florida, agencies and programs that hold themselves out to the public as HIV test sites must register with the Florida Department of Health. Registrations must be renewed by the site each year. Rapid HIV screening tests are conducted at some of these sites. Registered sites have a local point of contact located in the county health department. The point of contact is the regional Early Intervention Consultant or EIC. A listing of EIC staff can be found at the Florida Department of Health website.

All sites must maintain confidential client or patient records that are protected by Florida's HIV confidentiality laws.

## Slide 27 – HIV Testing Technologies

DOH Required Training FY2013-2014

### HIV Testing Technologies



This section will cover the HIV testing technologies used at Florida's registered test sites as of 2013



This section will cover the HIV testing technologies used at Florida's registered test sites as of 2013.



## Slide 28 – Laboratory-Based HIV Testing

DOH Required Training FY2013-2014



### Laboratory-Based HIV Testing

Private or Public

- Screening
- Confirmation
- Other related diagnostic tests

Florida Bureau of Laboratories

- Memorandum of agreement
- Fee for services
- Jacksonville
- Miami

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Laboratory-based HIV testing can be conducted at private or public labs for HIV screening and, if necessary, confirmation testing. In addition, laboratories conduct other related diagnostic tests for HIV viral load, genotyping, CD4 count and CD ratio.

Sites that use the public health services of the Florida Bureau of Laboratories, or FBOL, may be required to have a memorandum of agreement, or MOA, between the site and the Florida Department of Health.

Sites without an MOA may be charged a processing fee from FBOL. The FBOL retrovirology laboratories, where HIV testing is conducted, are located in Jacksonville and Miami. Some county health departments or individual sites may have their own labs that process samples before sending them to FBOL.




## Slide 29 – Samples or Specimens for HIV Testing

DOH Required Training FY2013-2014

**Samples or specimens for HIV testing**

- Whole Blood
- Plasma
- Oral mucosa (OMT)
- Dried blood spots (DBS)



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HIV testing involves several products and technologies that require obtaining specific specimens or samples from clients. Samples include:

- Whole blood obtained by a venipuncture needle. This is the most common sample used for lab-based testing.
- Whole blood can be centrifuged or spun into its components of cells and fluid called plasma. Plasma is ideal for newer lab-based testing technologies and procedures.
- The OraSure collection device pulls specific cells called oral mucosal transudate, or OMT, from the lining of the mouth. Saliva is not obtained or tested.
- Dried blood spots, or DBS, are generally used by sites conducting HIV research. The use of DBS by other testing sites may become more common in the coming years.





## Slide 30 – Types of HIV Tests


DOH Required Training FY2013-2014

### Types of HIV Tests

Testing technology available in Florida

- Waived Screening
- Lab-Based Screening
- Lab-Based Confirmatory

All reactive and positive screening tests must be confirmed by a lab-based test approved by the Food and Drug Administration (FDA).

The logo for Florida Health, featuring a stylized sun with rays in yellow and orange, and the words "Florida HEALTH" in blue and orange.

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There are three main types of HIV testing technologies available in Florida:

- Waived screening tests, meaning they may be conducted at sites other than a licensed laboratory.
- Lab-based screening tests and,
- Lab-based confirmatory tests

All reactive and positive screening tests must be confirmed with a lab-based confirmatory test approved by the Food and Drug Administration or FDA.




## Slide 31 – Lab-Waived Screening

DOH Required Training FY2013-2014

### Lab-Waived Screening

Waived rapid HIV antibody tests	<ul style="list-style-type: none"><li>• Lab-like setting</li><li>• CLIA waiver</li><li>• Biohazard requirement</li></ul>
Waived rapid HIV antibody test results	<ul style="list-style-type: none"><li>• Reactive</li><li>• Non-reactive</li><li>• Invalid</li><li>• Discordant</li></ul>

31



Some rapid HIV antibody tests are waived, or allowed to be used outside of a licensed laboratory, allowing screening tests to be given in non-healthcare settings. Rapid testing sites operate under strict guidelines and in a lab-like setting. Sites must have a CLIA waiver issued by the state and have biohazard handling procedures in place. A state lab license for these sites is not required.

Waived rapid HIV antibody test results can be:

- Reactive or preliminarily positive
- Non-reactive indicating the test did not detect HIV antibodies
- Invalid meaning the test could not be interpreted
- Discordant meaning the rapid screen and lab-based confirmatory results did not match.



## Slide 32 – Lab-Based Screening

DOH Required Training FY2013-2014



### Lab-Based Screening

Antibody Enzyme Immunoassay or EIA

- 2<sup>nd</sup> generation
- Oral and dried blood spot samples

Antibody/Antigen combination IA

- 4<sup>th</sup> generation
- Blood and plasma samples

32

Lab-based testing begins with a screening test. Depending on the sample type, either an antibody EIA or an antibody/antigen IA is performed. OMT and DBS samples are screened with a 2<sup>nd</sup> generation Enzyme Immunoassay or EIA. Blood and plasma samples are screened with a 4<sup>th</sup> generation antibody/antigen Immunoassay or IA. A positive 4<sup>th</sup> generation IA combination test does not make a distinction between reaction to an HIV antibody or the HIV antigen, it only determines the presence of one or the other.

Positive screens from both the EIA and IA must be confirmed with additional lab-based tests.




### Slide 33 – Lab-based Confirmatory Tests

DOH Required Training FY2013-2014

## Lab-Based Confirmatory Tests

- Antibody Confirmatory
  - Western blot
  - Supplemental
- Antigen Confirmatory
  - Nucleic Acid Amplification Test (NAAT)
  - Determines acute or very early infection

33



FDA approved tests are used to confirm a positive screen and can be antibody confirmatory or antigen confirmatory.

Western blot is the confirmatory for oral and dried blood spot samples. It has a high reliability to determine chronic HIV infection.

The fourth generation antigen/antibody screen for blood or plasma samples does not distinguish between antigen or antibody; if it is positive, samples are confirmed first for antibodies with a supplemental test. Supplemental tests can be used to distinguish HIV-1 antibodies from HIV-2 antibodies. If the supplemental is negative, the sample is confirmed with an antigen nucleic acid amplification or NAAT test. NAAT has a high reliability to determine acute or very early HIV infection.

### Slide 34 – Western Blot Results

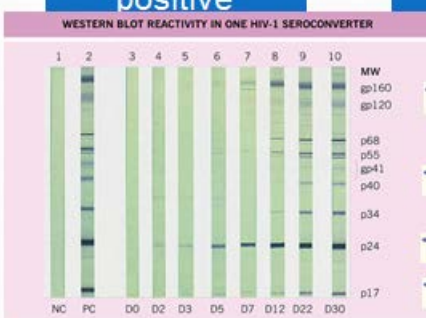
DOH Required Training FY2013-2014

## Western Blot Results

Antibody positive


Antibody negative

WESTERN BLOT REACTIVITY IN ONE HIV-1 SEROCONVERTER



NC PC D0 D2 D3 D5 D7 D12 D22 D30

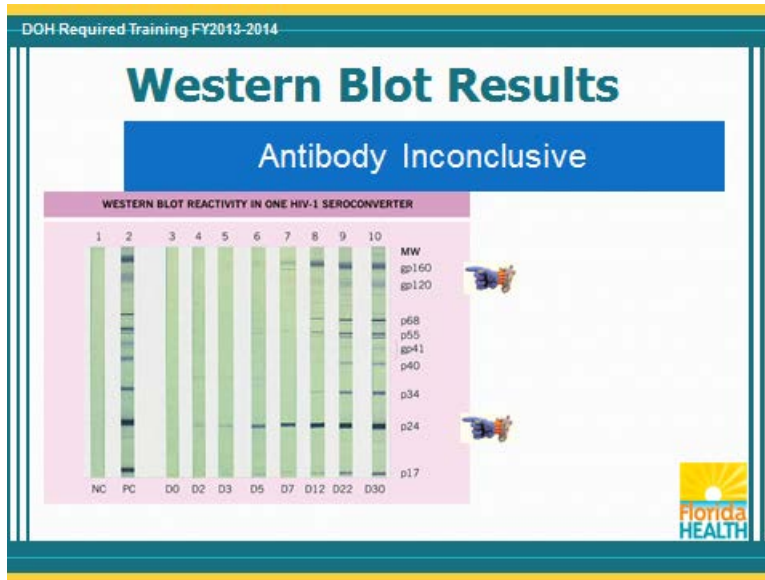
MW  
gp160  
gp120  
p68  
p55  
gp41  
p40  
p34  
p24  
p17



The Western blot HIV antibody confirmatory test is read in bands and indicates antibody positive, antibody negative, or inconclusive results. A specific set of bands must be clearly read by a machine and lab technician before it is determined HIV positive.

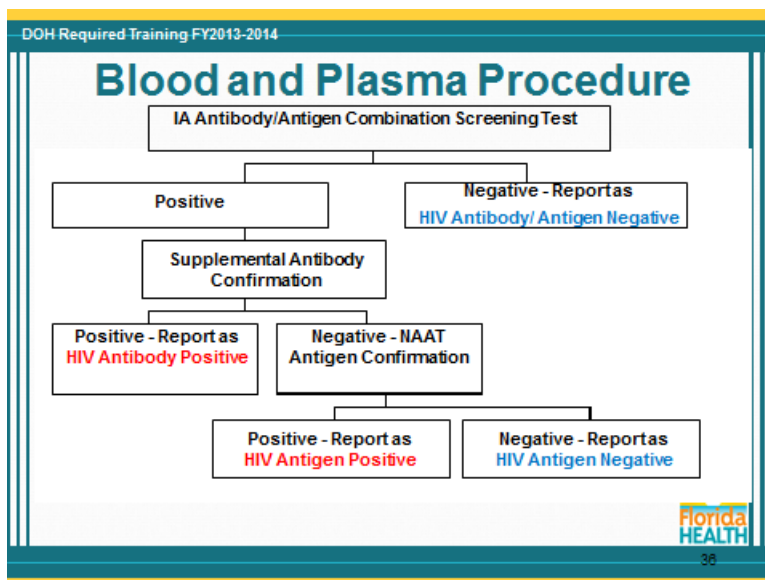


## Slide 35 – Western Blot Results



If only some of the bands can be read, or if the bands are not clearly indicated, the sample may be determined as inconclusive and reported by the lab as indeterminate. This may indicate that the client was tested while in the “window period” of antibody seroconversion. Or, it may mean the client has another viral infection such as Hepatitis, or that there was a problem with the initial rapid screen or the sample that was sent to the lab. In any case, the client must be retested as quickly as possible.

## Slide 36 – Blood and Plasma Procedure



This slide shows the algorithm or logic model that describes the HIV testing procedures followed by the Florida Bureau of Laboratories for blood and plasma samples.

Samples are first screened with a 4<sup>th</sup> generation IA antibody/antigen combination test. Negative screens are reported as HIV negative and positive screens are confirmed with a supplemental antibody test.

Positive supplementals are reported as HIV antibody positive. Negative supplementals are confirmed with a NAAT HIV antigen test.

Negative NAAT confirmations are reported as HIV antigen negative. Positive NAAT tests are reported as HIV antigen positive indicating early HIV infection.





Slide 37 – What is NAAT Positive?

DOH Required Training FY2013-2014

## What Is NAAT Positive?


HIV antigen test

- Indicates acute HIV infection
- Positive without the presence of antibodies

Over 50% of new infections

- High viral load
- Highly infectious

Quick response by DIS is imperative



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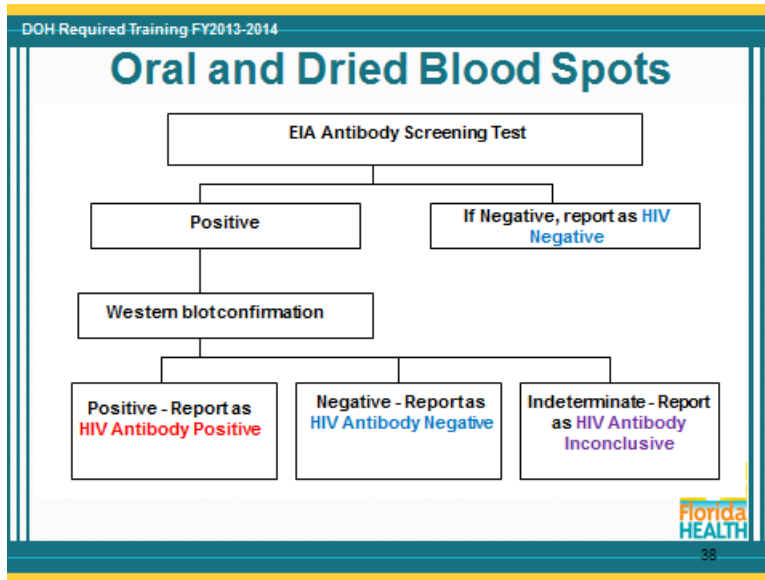
NAAT-positive clients demand special attention from the lab, the test site, the STD DIS staff and the county linkage coordinator.

NAAT positive refers to an antigen test that indicates acute, or very early, HIV infection, and that the client is HIV positive without the detectable presence of HIV antibodies. It is estimated that over 50% of all new HIV infections come from clients who are antibody negative and NAAT antigen positive. Most likely the client will have a high viral load or amount of measurable HIV reproducing in the blood stream making the client highly infectious.

A quick response by the DIS to contact these clients is imperative for both the health of the client and to prevent further transmission of HIV.



## Slide 38 – Oral and Dried Blood Spots

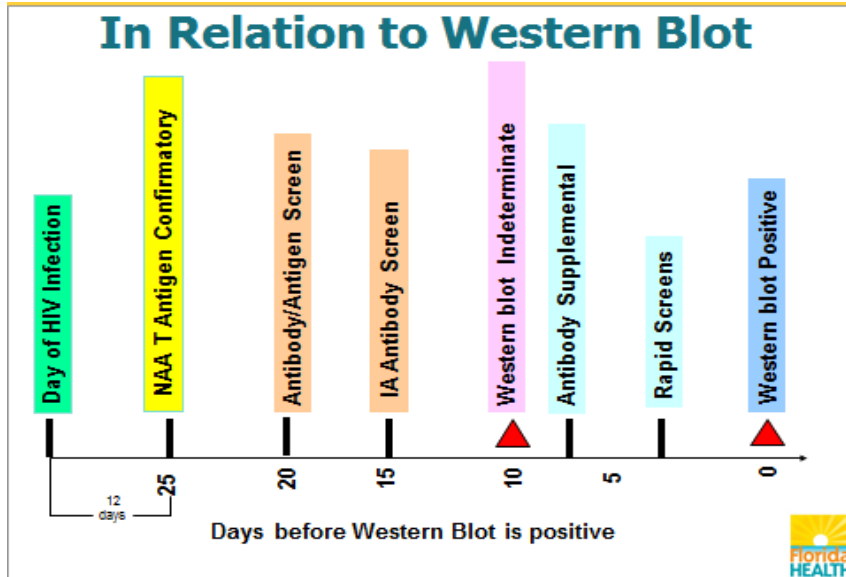


This slide shows the algorithm or procedure followed by the Florida Bureau of Laboratories when testing oral and dried blood spot samples for HIV antibodies.

Oral and dried blood spot samples are screened with a 2<sup>nd</sup> generation EIA antibody test. Negative screens are reported as HIV negative. Positive screens are confirmed with a 1<sup>st</sup> generation Western blot antibody test. Western blot can have three results - positive, negative, or inconclusive. Positive confirmations are reported as HIV antibody positive. Negative confirmations are reported as HIV antibody negative. Indeterminate confirmations are reported as inconclusive. Clients who test inconclusive do not have a final test result and must be retested. It is strongly recommended that indeterminate follow-up testing be with a blood or plasma sample and because the client may have been in the window period and was seroconverting from HIV negative to HIV positive, follow-up testing should be conducted as soon as possible.



## Slide 39 – In Relation to Western Blot



This slide may seem complicated, but bear with me.

It is a comparison of HIV tests in relation to a positive Western blot. Time starts from the day a person becomes HIV infected and runs forward to the right ending with a positive Western blot confirming the presence of HIV antibodies. An indeterminate Western blot can occur ten days before a positive Western blot.

Current rapid antibody screening tests can detect HIV antibodies an average of four days before Western blot. Supplemental antibody confirmation tests can detect HIV antibodies at about nine days before Western blot.

EIA antibody screens and antibody/antigen combination screens are positive at 15 and 20 days, respectively.

NAAT antigen confirmation can detect the presence of HIV 25 days before a




## Slide 40 – Evaluation and Monitoring

DOH Required Training FY2013-2014

### Evaluation and Monitoring

Tests include:

- CD4 T-cell count
- CD4/CD8 ratio
- Viral load
- Complete Blood Count (CBC)
- Hepatitis B
- Hepatitis C
- STDs
- Tuberculosis
- HIV genotyping
- Opportunistic infections
- Substance abuse and mental health as indicated



40

Baseline evaluation and monitoring tests should begin as quickly as possible after an HIV-positive test.

These tests include, but are not limited to, CD4 T-cell count and CD4/CD8 T-cell ratio, HIV viral load, a complete blood cell count, hepatitis B and hepatitis C, screening for sexually transmitted diseases, Tuberculosis, HIV genotyping to determine HIV drug therapy resistance, evaluation for AIDS related opportunistic infections and substance abuse and mental health screening as indicated.

## Slide 41 – Viral Load Testing

DOH Required Training FY2013-2014

### Viral Load Testing

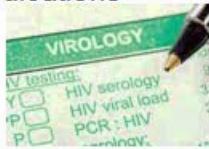

Important follow up test

Immune system and treatment efficacy

- Measure HIV damage
- Determine usefulness of medications

Quantitative

- Gives a count of HIV
- Logarithmic
- Can be “undetectable”

41

Viral load testing is an important follow-up test for clients who test HIV positive. Physicians order viral load tests to monitor and evaluate immune system damage and usefulness of medications.

Different from the NAAT test, viral loads are quantitative meaning they give an actual count of HIV in a sample of blood. The result is given in a logarithmic number and is read as per cubic millimeter of blood.

Results can be “undetectable”, meaning the amount of HIV is below a threshold that the test can read. Clients who have undetectable viral loads should still be considered potentially infectious to others.



## Slide 42 – Over-the-Counter Test Products

DOH Required Training FY2013-2014




### Over-the-Counter Test Products

**Home Access**

- Test Medical Symptoms, Inc.
- Collection kit
- Dried blood spot samples
- Sent to a private lab

**OraQuick Oral Rapid**

- OraSure Technologies, Inc.
- Rapid test
- Oral samples
- Conducted in user's home

42

The FDA has approved two over-the-counter HIV test products available for purchase from stores and pharmacies without a prescription. Both are accurate at detecting HIV antibodies and come with instructions.

Home Access, manufactured by Test Medical Symptoms, Inc., is a collection kit that uses dried blood spot samples collected by the user and sent to a private lab for testing.

OraQuick Oral Rapid, manufactured by OraSure Technologies, Inc., is a rapid test that uses oral samples collected by the user. Testing takes place in the user's home.


## Slide 43 – Test Documentation

DOH Required Training FY2013-2014

### Test Documentation

Informed consent  
Risk assessment  
Rapid test forms  
Agency documentation  
Appointment card  
Medical record keeping and retention  
May be reviewed for quality assurance

Test Site	Test Type	Test Result	Test Date	Test Time	Test Location	Test Status	Test Notes
Test Site 1	Test Type 1	Test Result 1	Test Date 1	Test Time 1	Test Location 1	Test Status 1	Test Notes 1
Test Site 2	Test Type 2	Test Result 2	Test Date 2	Test Time 2	Test Location 2	Test Status 2	Test Notes 2
Test Site 3	Test Type 3	Test Result 3	Test Date 3	Test Time 3	Test Location 3	Test Status 3	Test Notes 3
Test Site 4	Test Type 4	Test Result 4	Test Date 4	Test Time 4	Test Location 4	Test Status 4	Test Notes 4
Test Site 5	Test Type 5	Test Result 5	Test Date 5	Test Time 5	Test Location 5	Test Status 5	Test Notes 5
Test Site 6	Test Type 6	Test Result 6	Test Date 6	Test Time 6	Test Location 6	Test Status 6	Test Notes 6
Test Site 7	Test Type 7	Test Result 7	Test Date 7	Test Time 7	Test Location 7	Test Status 7	Test Notes 7
Test Site 8	Test Type 8	Test Result 8	Test Date 8	Test Time 8	Test Location 8	Test Status 8	Test Notes 8
Test Site 9	Test Type 9	Test Result 9	Test Date 9	Test Time 9	Test Location 9	Test Status 9	Test Notes 9
Test Site 10	Test Type 10	Test Result 10	Test Date 10	Test Time 10	Test Location 10	Test Status 10	Test Notes 10



43

Registered test sites must maintain test documentation; this includes, but is not limited to:

- informed consent on a Department of Health form, within a medical record, or on an IRB approved research form
- risk assessment on a Department of Health form and/or on an agency document
- rapid test forms
- return appointment card as needed and
- medical records for each client.

Maintaining documentation and following retention standards are key elements in providing quality service to clients and may be reviewed by Department of Health staff for quality assurance.








Slide 44 – End of Section Three


DOH Required Training FY2013-2014

## End of Section Three

This concludes section three.  
You must complete a short question/answer  
review before moving to the next section.



To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.



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This concludes section three. You must complete a question/answer review before moving to section four.





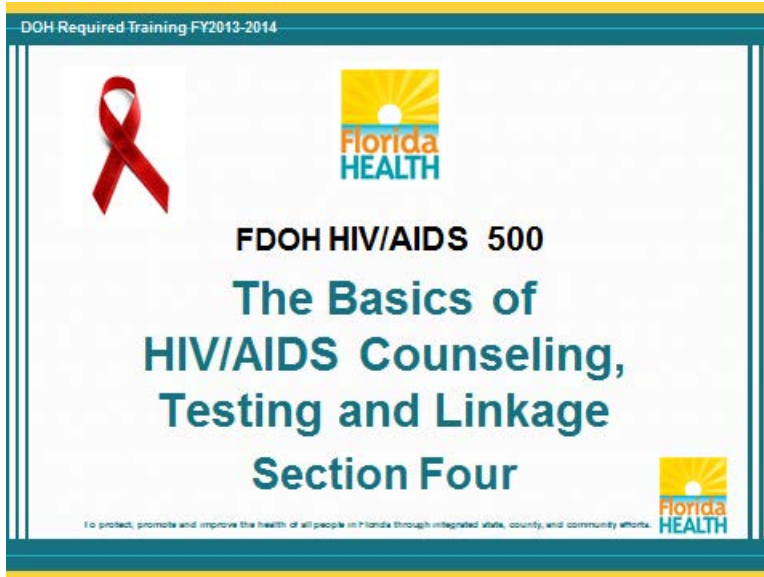
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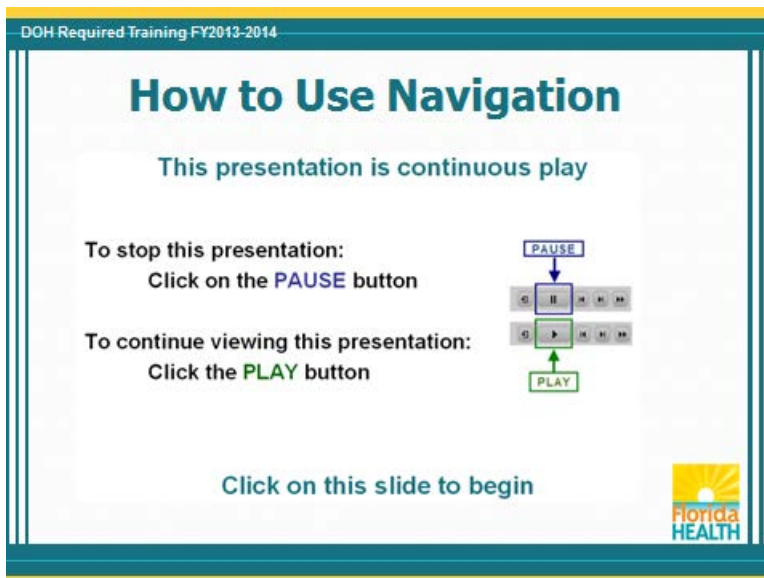
## Section Four

### Slide 1 - Welcome



The Florida Department of Health welcomes you to the FDOH HIV/AIDS 500 Course, The Basics of HIV/AIDS Counseling, Testing and Linkage, Section Four.

### Slide 2 – How to Use Navigation



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### Slide 3 - Legal Issues Related to HIV Counseling, Testing and Linkage

DOH Required Training FY2013-2014



**Section Four**

**Legal Issues Related to  
HIV Counseling, Testing  
and Linkage**



3

This section of the FDOH Basics of HIV/AIDS 500 course will offer an overview of legal issues related to HIV counseling, testing and linkage. This information is from the Florida Omnibus AIDS Act, the state statute that covers HIV counseling, testing and linkage.

This section will take about 20 minutes to complete.


### Slide 4 - In This Section

DOH Required Training FY2013-2014

**In This Section**

Specific parts of Florida Statute 381.004  
The Florida Omnibus AIDS Act

HIV testing counselors are encouraged to become familiar with Florida's AIDS related laws, codes, model protocols, and technical assistance guidelines that govern HIV testing



4

In this section, specific parts of the Florida Statute 381.004 called the Florida Omnibus AIDS Act are highlighted. HIV testing counselors are strongly encouraged to become familiar with Florida's AIDS related laws, codes, model protocols and technical assistance guidelines that govern HIV testing.






Slide – 5 Learning Objective Section Four

DOH Required Training FY2013-2014

## Learning Objectives Section Four

- Understand the Florida Omnibus AIDS Act as it pertains to HIV counseling, testing and linkage
- Understand Partner Services and who conducts them

5



Learning Objectives Section Four

After finishing this section, participants will be able to:


- Understand the Florida Omnibus AIDS Act as it pertains to HIV counseling, testing and linkage
- Understand Partner Services and who conducts them

Slide 6 – Florida Omnibus AIDS Act


DOH Required Training FY2013-2014

## Florida Omnibus AIDS Act

- Florida Statute 381
- Enacted in 1988
- Comprehensive HIV/AIDS legislation
- Has been amended
- DOH authority to make specific rules
- Ensures voluntary, confidential testing



6



Florida Statute 381.004, known as the Florida Omnibus AIDS Act, was enacted in 1988 by the Florida legislature making Florida one of the first states to have comprehensive legislation that addresses all aspects of HIV and AIDS.

Since 1988, the statute has been amended several times to ensure conformity with advances in scientific knowledge, medical treatments and public perceptions.

The Florida AIDS Omnibus Act gives the Florida Department of Health the authority to make specific rules to ensure voluntary and confidential HIV testing.







## Slide 7 – Florida Statute 381.004

DOH Required Training FY2013-2014

### Florida Statute 381.004

- Intent and definitions
- Informed consent
- County health departments
- Site registration
- Model protocols
- Fees and rules
- Conditions for treatment or admission

7

Florida statute 381.004 gives direction to the Florida Department of Health regarding HIV counseling and testing. The statute addresses:



- Intent and definitions
- Informed consent
- County health department testing programs
- Test site registration and annual renewals
- Model protocols
- Fees and rules and
- Conditions for treatment or admission

## Slide 8 – Releasing Test Results

DOH Required Training FY2013-2014

### Releasing Test Results

- Reactive or positive screening tests are not final without confirmatory test
- Preliminary positives results in certain situations:
  - Medical care cannot wait
  - A woman is about to give birth
  - When an FDA-approved rapid test is used

8

HIV rapid reactive or lab-based positive screening tests are not final in determining HIV infection. Rapid reactive tests must be followed by a confirmatory test before anyone is determined HIV positive. Positive results cannot be given to clients without receipt of a laboratory-based, FDA approved confirmatory test that has been interpreted by the lab report as HIV positive. Clients can only be informed of a positive screening test in certain situations, such as:

- When a physician determines that medical care cannot wait.
- When a woman is about to give birth
- When an FDA-approved rapid test is used



## Slide 9 – Releasing Test Results

DOH Required Training FY2013-2014



### Releasing Test Results

Confirmation tests

- Must be FDA approved technologies
- Antibody or antigen

Rapid reactive is preliminary positive

- Linkage to medical care
- Referrals to services
- Partner Services

9

Confirmation tests must be FDA approved technologies that can detect the presence of HIV antibodies or HIV antigen.

Reactive rapid test results are considered preliminary positive. Before lab-based confirmation results are received, clients should receive:

- Linkage to medical care
- Referrals to services and
- Referral to Partner Services from the county health department Disease Intervention Specialists



## Slide 10 – Pregnant Women

DOH Required Training FY2013-2014

### Pregnant Women

Standard of care

- Initial prenatal visit
- Follow up at 28 - 32 weeks
- Must be informed of tests
- Right to refuse tests
- Can choose to “opt out”
- Choice must be documented

10

For pregnant women, HIV testing, as well as testing for other sexually transmitted diseases, is to be provided as a standard of care at the initial prenatal care visit and again at 28 to 32 weeks into the pregnancy.

Prior to testing, practitioners shall notify the woman which tests will be conducted and of her right to refuse any or all tests. If the woman objects to testing or chooses to “opt-out” of HIV testing, a written and signed statement of her choice must be documented, placed in the woman’s medical record, and no testing should be conducted.




## Slide 11 – Specimen Donations

DOH Required Training FY2013-2014

### Specimen Donations

HIV testing of donated products


- Blood
- Plasma
- Organ
- Sperm



Result notification to donors

- Centers are not registered HIV test sites

HIV-positive donations are discarded as biohazard materials



11

All specimens of blood, plasma, blood product, organ, or sperm donations must be HIV tested at the time of donation. Donations cannot be sold or distributed without first being determined as HIV negative.


Donation centers and sperm banks will offer result notification to the donor of any HIV-positive donation. Donation centers, blood and plasma centers, and sperm banks are not registered HIV test sites and the public is discouraged from using them for the purpose of HIV testing.

Donations that screen HIV-positive are discarded as biohazard materials.

## Slide 12 – Partner Services


DOH Required Training FY2013-2014

### Partner Services



HIV positive or rapid reactive

- Carried out by client or local health department DIS
- No other staff may conduct Partner Services
- Identify, locate and inform partners and offer testing
- Functions best when sites have a working relationship with their county health department



12

Clients who test HIV positive or rapid reactive are offered Partner Services. Partner Services can be carried out by the client or by local health department Disease Intervention Specialists, or DIS. No other staff at the test site or the health department may conduct Partner Services. DIS staff meets with the client to identify and locate sexual or drug sharing partners to inform them of their risk and offer HIV and STD testing.

Partner Services functions best when HIV test sites have a working relationship with their local county health department.



## Slide 13 – Test Results

DOH Required Training FY2013-2014

### Test Results


Released by the authority of:

- The person tested
- Legal representative
- Court order
- On a need-to-know basis

Positive results reportable to the Florida Department of Health

- Super confidential

May disclose results to legal spouses



13

The release of HIV test results must be authorized by the following:

- The person who was tested
- Legal representative
- Court order or
- Need-to-know basis

Confidential positive HIV test results are reportable to the Florida Department of Health. The Department has special security procedures provided by the super confidentiality section of Florida Statute 381 that strictly guards client information. Health care providers may disclose test results to a client's sex and or needle-sharing partners who are legal spouses.

## Slide 14 - Penalties



DOH Required Training FY2013-2014

### Penalties

For HIV-infected individuals who have sex without first informing partners, it is a:

- Third degree felony not to inform partner and obtain permission
- First degree felony for multiple offenses
- No exceptions

Use of a condom is not informing a partner

14

For HIV-infected individuals, it is a third degree felony to have sex without first informing potential partners of his/her HIV status and obtaining permission for sexual contact. This penalty increases to a first degree felony for multiple offenses. There are no exceptions.

The use of a condom during sexual contact is not informing a partner and does not exempt an HIV-infected person from any provision of this law.








Slide 15 – End of Section Four

DOH Required Training FY2013-2014

## End of Section Four

This concludes section four.  
You must complete a short question/answer  
review before moving to the next section.

To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.



15

End of Section Four

This concludes section four, and a short question and answer review will follow on the material presented.

You must complete the review before moving to the next section.

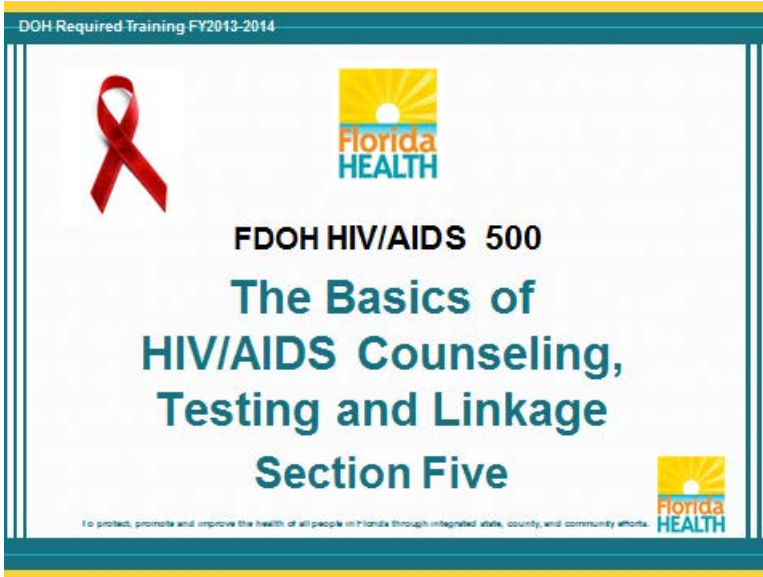






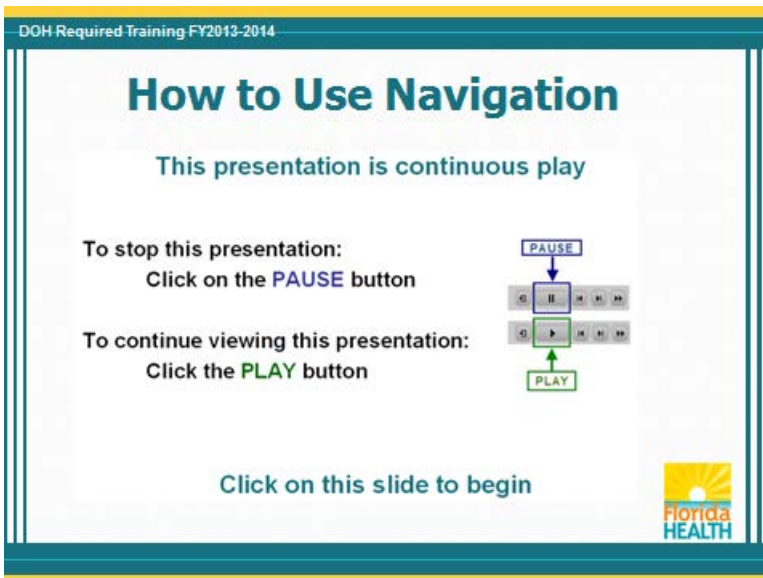
## Section Five

### Slide 1 - Welcome



The Florida Department of Health welcomes you to the FDOH HIV/AIDS 500 Course, The Basics of HIV/AIDS Counseling, Testing and Linkage, Section Five.

### Slide 2 – How to Use Navigation



#### How to Use Navigation

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### Slide 3 – Sexually Transmitted Diseases and Tuberculosis

DOH Required Training FY2013-2014



**Section Five**

**Sexually Transmitted  
Diseases and  
Tuberculosis**



This section of the FDOH Basics of HIV/AIDS 500 course will cover common sexually transmitted diseases, or STDs. This section will also offer basic information about tuberculosis, or TB, and how STDs and TB relate to HIV.


This section will take about 20 minutes to complete.

### Slide 4 – Learning Objectives Section Five

DOH Required Training FY2013-2014

**Learning Objectives Section  
Five**

- Know the most common STD along with general signs and symptoms
- Associate the links between STDs, hepatitis, tuberculosis and HIV
- Know the complications of STDs
- Know the basics of viral hepatitis and tuberculosis



#### Learning Objectives Section Five

Upon completion of this section, participants will:

- Know the most common STDs along with general signs and symptoms
- Associate the links between STDs, hepatitis, tuberculosis and HIV
- Know the complications of STDs
- Know the basics of viral hepatitis and tuberculosis







## Slide 5 – Infectious Diseases

DOH Required Training FY2013-2014

### Infectious Diseases

- Microbes transmitted from person to person
- Sexually transmitted diseases
- Viral hepatitis
- Tuberculosis
- HIV co-factors



This section will focus on various infectious diseases HIV testing counselors are likely to encounter while working with clients.

There are millions of microbes capable of causing disease and counselors need to understand those that are transmitted from person to person such as sexually transmitted diseases, tuberculosis and viral hepatitis. These diseases are referred to as HIV co-factors that may assist with HIV transmission and speed up the disease process of AIDS.



## Slide 6- Introduction to STDs

DOH Required Training FY2013-2014

### Introduction to STDs

- Contracted primarily through sexual intercourse
- Can reoccur
- Can be life threatening
- Can be co-factors for HIV transmission
- Can be co-infections with HIV
- Be familiar with signs, symptoms, modes of transmission and risk factors



Like HIV, sexually transmitted diseases are contracted mainly through sexual intercourse. Some are difficult to spread between same sexes, and some are more common in women than in men. STDs can infect adults, teenagers, children and newborn babies. STDs can reoccur if an infected person does not encourage all of their sexual partners to be treated, and can be life threatening if left untreated. STDs can be co-factors for HIV transmission or be co-infections with HIV.

Because of the established links between STDs and HIV, high co-morbidity rates and overlapping risk factors, all HIV testing counselors should become familiar with the signs and symptoms, modes of transmission and risk factors associated with STDs.

## Slide 7 – Most Common STDs

DOH Required Training FY2013-2014

### Most Common STDs

Common STDs found in Florida are:

- Chlamydia
- Gonorrhea
- Syphilis
- Genital herpes
- Human papillomavirus (HPV) or genital warts
- Hepatitis B virus (HBV)



The more common STDs found in Florida are:

- Chlamydia
- Gonorrhea
- Syphilis
- Genital herpes
- Human papillomavirus also called HPV or genital warts
- Hepatitis B virus or HBV





## Slide 8 – General Signs and Symptoms


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### General Signs and Symptoms

Signs and symptoms may include:

- Discharge from the penis or vagina and/or pain during urination
- Lower abdominal pain
- Lesions, sores or blisters on or around the genital area

Some have specific symptoms, others generalized including fever or rash



In general, typical signs and symptoms of STDs may include:

- Discharge from the penis or vagina and/or pain during urination
- Lower abdominal pain, and/or
- Lesions, sores or blisters on or around the genital area

Some STDs will have specific symptoms, others generalized symptoms including fever or rash.



## Slide 9 – Common Bacterial STDs

DOH Required Training FY2013-2014

### Common Bacterial STDs

Chlamydia, syphilis and gonorrhea

- Can be diagnosed and treated
- Chlamydia is most common STD in Florida
- Syphilis follows progressive stages and may happen in “clusters”
- Gonorrhea can cause pelvic inflammatory disease
- Have all sex partners treated

Chlamydia, syphilis and gonorrhea are caused by specific bacteria. If a person is aware of their symptoms and seeks medical care, all three can be successfully diagnosed and treated. Chlamydia is the most common STD diagnosed in Florida.

Syphilis follows progressive stages, can cause severe neurological damage, and may be found in “clusters” or cohorts of people who share one or more common sexual partner or partners.

In women, gonorrhea can cause pelvic inflammatory disease, or PID.

To avoid a circle of reoccurring infection, it is a good idea to have all of an infected person's sex partners treated for bacterial STDs.





## Slide 10 – Common Viral STDs

DOH Required Training FY2013-2014

### Common Viral STDs

Genital herpes, human papillomavirus (HPV) and hepatitis B virus (HBV)

- Genital herpes most common in women
- HPV can cause warts and PID
- HBV commonly found in people with sexually transmitted HIV
- HBV vaccinations recommended for those at high risk, infants and pregnant women



Genital herpes, human papillomavirus or HPV and hepatitis B virus or HBV, are caused by specific viruses.

Herpes lives within the central nervous system and travels along nerve cells into membranes causing lesions or sores. Genital herpes can be found in the mouth, nose, rectum and genitals. It is easier for a man to transmit genital herpes to his female sex partner than to his male sex partner, therefore, it is more commonly found in women.

HPV can cause warts to form anywhere on the body. When it occurs in a woman's cervix, it can cause PID, a condition that can cause sterility. Preventative HPV vaccines are available to people as early as age 11.

HBV is a common infection in people who come to public STD clinics and can be transmitted in the same ways as HIV. HBV, syphilis and HIV are not uncommon co-infections. HBV vaccinations are recommended for those at high risk including medical professionals and injection drug users. Vaccination is also recommended for infants and pregnant women.





## Slide 11 – STDs are Often Asymptomatic

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### STDs are Often Asymptomatic

- Can have symptoms or be asymptomatic
- With or without symptoms, can be passed to sex partners
- More than one can be passed at the same time


- STDs can have symptoms or be asymptomatic, meaning there are no detectable symptoms.
- With or without symptoms, STD infections can be passed to sex partners.
- More than one STD can be present and passed at the same time.

## Slide 12 – STD Treatments


DOH Required Training FY2013-2014

### STD Treatment

- Bacterial STDs can be treated and cured
- Viral STDs can be managed



- Detecting and treating STDs reduces chances of HIV transmission
- Lowers HIV viral loads



Bacterial STDs can be treated and cured with antibiotics.

For most viral infections, such as herpes and HIV, there is no cure; but, there are medications available to assist in managing these infections.

Studies have demonstrated that detecting and treating STDs in people with HIV decreases the amount of HIV in blood and genital fluids, which reduces chances of HIV transmission, and substantially lowers HIV viral loads.





## Slide 13 - Complications

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### Complications

If left untreated, STDs can cause:

- Serious and costly medical problems
  - Infertility
  - Ectopic pregnancy
  - PID
- Increased risk of HIV transmission
- Heart or nervous system disorders
- Birth defects
- Disabilities
- Death



STDs can create a range of complications. What you don't know about STDs can hurt you.

If left untreated, STDs can cause serious and costly medical problems like infertility, ectopic pregnancy and Pelvic Inflammatory Disease, or PID, in women. STDs that create sores open to the blood stream can increase the risk of HIV transmission. Certain STDs can cause heart damage and/or nervous system disorders. For infants born to women infected with one or more STD, serious and life-threatening birth defects can result. Babies can be infected as they are born, or while they are in their mother's womb. STDs can lead to a lifetime of disability and can be causal factors for death.



## Slide 14 – Links Between HIV and STDs

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### Links Between HIV and STDs

- STDs increase exposure to HIV infection by two mechanisms:
  - Breaks in the genital tract lining or skin
    - Ulcerative STDs, syphilis and herpes
  - Increased concentration of white blood cells in genital secretions
    - Non-ulcerative STDs, Chlamydia gonorrhea



There are clearly defined links between HIV and STDs.

- STDs increase susceptibility and exposure to HIV infection by two mechanisms.
  - Genital ulcerative STDs, syphilis and herpes, for example, result in chancroids, sores, or lesions that are breaks in the genital tract lining or skin.
  - These breaks create a portal of entry for other infections such as HIV.
- Non-ulcerative STDs, such as Chlamydia, gonorrhea and trichomoniasis, increase the concentration of white blood cells in genital secretions that can serve as targets for HIV.



## Slide 15 – Links Between HIV and STDs

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### Links between HIV and STDs

- Two to five times more likely to become HIV infected through sexual contact
- Persons with HIV and STD more likely to transmit HIV and have HIV in their genital fluids



There are clearly defined links between HIV and STDs.

- STDs increase susceptibility and exposure to HIV infection by two mechanisms.
  - Genital ulcerative STDs, syphilis and herpes, for example, result in chancroids, sores, or lesions that are breaks in the genital tract lining or skin.
  - These breaks create a portal of entry for other infections such as HIV.
- Non-ulcerative STDs, such as Chlamydia, gonorrhea and trichomoniasis, increase the concentration of white blood cells in genital secretions that can serve as targets for HIV.







## Slide 16 – Viral Hepatitis

DOH Required Training FY2013-2014

### Viral Hepatitis

- Hepatitis A (HAV)
- Hepatitis B (HBV)
- Hepatitis C (HCV)
  - Three genotypes I, II, III
- Public health concern
- Risk factors similar to HIV
- Can complicate HIV infection

Viral hepatitis includes three diseases caused by three separate viruses: Hepatitis A, or HAV; hepatitis B, or HBV; and hepatitis C, or HCV, of which there are three genotypes. Genotype one is the most common, genotypes two and three are more easily treated.

Hepatitis infections are major public health concerns because it may take years for symptoms to become apparent.

The risk factors for hepatitis B and hepatitis C are similar to the risk factors for HIV infection. In addition, hepatitis from A, B or C can complicate HIV infection by making HIV treatments more difficult to manage.

## Slide 17 – Vaccinations and Damage

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### Vaccinations and Damage



Florida offers hepatitis B vaccinations

Hepatitis can cause:

- Damage to the immune system
- Scarring of the liver or cirrhosis

Liver provides life sustaining functions

- Digestion
- Blood clotting and filtering
- Muscle building

Through funding from the CDC, the state of Florida offers hepatitis B vaccinations in areas of high risk to persons at high risk.

Hepatitis is a general term used to describe different viruses and illnesses, all of which cause the same problems, which are damage to the immune system and scarring of the liver, a condition called cirrhosis.

Hepatitis can cause the liver to become inflamed, decompress or swell and stop the liver from providing life sustaining functions for digestion, blood clotting and filtering, and muscle building.





## Slide 18 - Symptoms

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### Symptoms

Associated with hepatitis:

- Yellowing of skin and eyes, or jaundice
- Dark urine
- Light stool
- Fever
- Fatigue
- Nausea/abdominal pain
- Weight loss or anorexia

A graphic with the text "Hepatitis Symptoms" overlaid on a background of green, leafy plants.The logo for Florida Health, featuring a stylized sun with rays in yellow and orange, and the words "Florida HEALTH" in blue and orange.

Symptoms associated with hepatitis may include:


- Yellowing of skin and eyes, or jaundice
- Dark urine
- Light stool
- Fever
- Fatigue
- Nausea and/or abdominal pain
- Weight loss or anorexia




## Slide 19 – Hepatitis Info on the Web

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### Hepatitis Info on the Web



An overview of hepatitis can be found through the websites of The Institute of Health Pubmed or the CDC.



An overview of hepatitis can be found through the website of the Institute of Health Pubmed or from the CDC.

## Slide 20 - Tuberculosis

DOH Required Training FY2013-2014

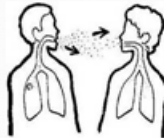

### Tuberculosis

Serious public health threat  
Caused by *Mycobacterium tuberculosis*

- Travels through the air to a person's lungs
- Can move to other parts of the body

People with active TB can infect:

- People they live with
- Associates
- Family members
- Co-workers

Tuberculosis, or TB, is not an STD, but is a serious public health threat especially in densely populated areas. Although there are many forms of TB, the one of major concern in Florida is caused by a bacteria called *Mycobacterium tuberculosis* that travels through the air when an infected person coughs or sneezes and lodges inside a newly infected person's lungs. TB can also move from the lungs through the blood to other parts of the body, such as the kidneys, spine and brain.

People with active TB can infect those they spend time with every day. This includes people they live with, associate with, family members and co-workers.



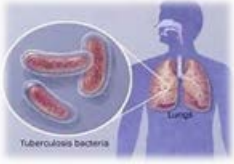
## Slide 21 – Symptoms of TB

DOH Required Training FY2013-2014


### Symptoms of TB

Symptoms of TB may include:

- Generalized weakness
- Weight loss
- Fever
- Night sweats
- Dry cough or coughing up blood
- Chest pain



Tuberculous bacteria




Symptoms of TB may include:

- Generalized weakness
- Weight loss
- Fever
- Night sweats
- Dry cough or coughing up blood
- Chest pain

## Slide 22 Treatments

DOH Required Training FY2013-2014

### Treatments




Can be successfully treated

- Takes the use of several antibiotics
- Over a long period of time
- Hospitalized in special facilities

Some forms are resistant to antibiotics

- Multidrug-Resistant TB is dangerous



TB can be successfully treated; however, it takes the use of several antibiotics over a long period of time. Many people with active TB need to be hospitalized in special facilities that can contain and kill any bacteria that is spilled into the air.

Some forms of TB are resistant to certain classes of antibiotics. This is called multidrug-resistant TB and is a very dangerous form of this infection.







## Slide 23 – Co-Infection TB and HIV

DOH Required Training FY2013-2014

### Co-infection TB and HIV



- Co-infection with TB and HIV is double trouble and can be fatal
- TB is leading cause of death among people with HIV
- Co-infection 100 times greater




Co-infection with TB and HIV is double trouble and can be fatal. Worldwide, TB is the cause of death for one out of every three people with AIDS, making it the leading cause of death among people infected with HIV. People co-infected with HIV and TB have a 100 times greater risk of developing active, or infectious, TB.


## Slide 24 – Link Between TB and HIV

DOH Required Training FY2013-2014

### Link Between TB and HIV



- CDC estimates 10 to 15 percent of TB cases, 30 percent among people 25 to 44, occur in HIV-infected individuals.
- All HIV-infected people should be tested periodically for TB
- TB can be prevented and cured



The CDC estimates that 10-15 percent of all TB cases and nearly 30 percent of cases among people ages 25 to 44 occur in HIV-infected individuals.

All HIV-infected people should be tested periodically for TB to find out if they have latent TB infection. TB disease can be prevented and cured, even in people with HIV infection.







Slide 25 – End of Section Five

DOH Required Training FY2013-2014

## End of Section Five

- This concludes Section Five
- Complete a short review
- Certificate is proof of completion and required for the HIV/AIDS 501 course
- HIV/ADIS 501 course schedules can be found on the FDOH website



To protect, promote and improve the health of all people in Florida through integrated state, county, and community efforts.

This concludes Section Five.

You must complete a short review and pass the post-review with a score of 80% or better before you can receive a certificate of completion for this course.

Once you complete and pass the post-review, you will be able to print your certificate. Your certificate is your proof of completing this course and is required for the HIV/AIDS 501 classroom course. HIV/ADIS 501 course schedules can be found on the FDOH website.

